

EPA Superfund
Record of Decision:

PRESQUE ISLE
EPA ID: PAD980508865
OU 01
ERIE, PA
09/30/1987

Text:

(1) THE

FEASIBILITY OF PORE PLUGGING REACTIONS BETWEEN THE BASS ISLAND FORMATION, THE FORMATION FLUIDS, AND THE INJECTION LIQUOR, AND (2) WHETHER THE ORGANIC COMPOUNDS IN THE FORMATION FLUIDS OF THE BEACH NO. 7 WELL WERE THE RESULT OF NATURALLY OCCURRING PETROLEUM HYDROCARBONS. HOUNSLOW REPORTED THAT BACTERIA DEGRADATION AND THE DIFFERENTIAL SOLUBILITY OF THE ORGANICS PRESENT IN PETROLEUM COMPLICATE THE ISSUE OF WHETHER THE ORGANIC FRACTION IN THE SAMPLES IS NATURAL OR WASTE DERIVED. EXAMINATION OF THE ANALYSES OF THE ORGANICS IN THE SEEP AND THE BASS ISLAND FORMATION FAILED TO REVEAL AN UNEQUIVOCAL ORIGIN.

A NUMERICAL MODEL CALLED NEMESIS WAS EMPLOYED ON BEHALF OF PADER, TO SIMULATE CONTAMINANT TRANSPORT UNDER VARIOUS COMBINATIONS OF RESERVOIR CONDITIONS, HYDRAULIC PARAMETERS, MIXING PARAMETERS, AND INJECTION PRESSURES APPROPRIATE FOR THE PRESQUE ISLE SETTING. SOME RESULTS OF SIMULATIONS USING THIS MODEL INDICATE THAT THE INJECTED PULPING LIQUOR FROM THE HAMMERMILL INJECTION WELLS COULD HAVE REACHED THE BEACH NO. 7 WELL. IT IS USEFUL TO NOTE THAT THE ISSUE OF WHETHER THE SEEP EXISTED PRIOR TO THE DOCUMENTED COMPLAINTS IN THE EARLY 1970'S (I.E., PRIOR TO HAMMERMILL'S INJECTION PROGRAM) HAS BEEN A MATTER OF DISPUTE BETWEEN PADER AND HAMMERMILL.

THE POTENTIAL POPULATIONS AT RISK FROM THIS AND OTHER SIMILAR DISCHARGES ARE THE CITY OF ERIE WHICH HAS A POPULATION OF 119,000, AND ERIE COUNTY, WHICH HAS A POPULATION OF ABOUT 280,000 (INCLUDING THE CITY OF ERIE). ADDITIONALLY, THE AVERAGE NUMBER OF VISITORS TO THIS PARK IS APPROXIMATELY 4.3 MILLION ANNUALLY.

SURFACE WATER USERS POTENTIALLY AT RISK INCLUDE THOSE WHO USE LAKE ERIE FOR RECREATIONAL PURPOSES. LAKE ERIE IS ALSO THE MAJOR SOURCE OF DRINKING WATER FOR THE CITY OF ERIE. THERE ARE TWO INTAKES IN THE LAKE BOTH OF WHICH RUN IN A NORTHWEST DIRECTION APPROXIMATELY 4 MILES NORTHWEST OF THE PRESQUE ISLE SITE. ANOTHER USE OF THE LAKE IS SUPPORT FOR WILDLIFE.

ALL FACILITIES IN THE PARK RECEIVE THEIR WATER FROM THE CITY OF ERIE WATERWORKS. THERE ARE NUMEROUS SHALLOW GROUND WATER WELL USERS ONSHORE IN THE AREA ADJACENT TO PRESQUE ISLE, HOWEVER, THE MAJORITY OF RESIDENTS IN THE CITY TO OBTAIN WATER FROM THE CITY OF ERIE WATERWORKS. OUTSIDE THE CITY, GROUND WATER IS THE PRIMARY SOURCE OF DRINKING WATER. ANY RELEASE OF HAZARDOUS SUBSTANCES INTO THE GROUND WATER COULD HAVE ADVERSE EFFECTS ON THE WELL WATER SUPPLIES OF THE AREA.

#CR

COMMUNITY RELATIONS HISTORY

THE FIRST PUBLIC ATTENTION WHICH FOCUSED ON THE PRESQUE ISLE SITE OCCURRED IN 1963 WHEN HAMMERMILL, IN AN ATTEMPT TO DISPOSE OF ITS PULPING WASTE, PROPOSED USING DEEP WELL INJECTION TO PUMP WASTE EFFLUENT INTO THE BASS ISLAND FORMATION. BECAUSE THIS TECHNIQUE WAS NEWLY DEVELOPED AT THE TIME, PRESS COVERAGE HIGHLIGHTED THE UNIQUE EXPERIMENT AS ANSWERING "THE NEEDS OF BOTH COMPANY AND THE STATE."

ADDITIONAL PRESS COVERAGE WAS RECEIVED IN THE SPRING OF 1968 WHEN ONE OF THE INJECTION WELLS WAS REPORTED TO HAVE RUPTURED AS A RESULT OF EROSION. THE WASTE EFFLUENT, NORMALLY PUMPED INTO THE BASS ISLAND FORMATION, FLOWED INTO LAKE ERIE FOR SEVERAL WEEKS. THIS SITUATION ALSO FUELED A CONTROVERSY OVER OFFSHORE DRILLING WHICH WAS BEING PROPOSED FOR LAKE ERIE AT THE TIME OF THE MISHAP. AREA NEWSPAPERS SPECULATED ON THE POTENTIAL FOR SIMILAR ACCIDENTS RESULTING IN OIL SPILLS ON LAKE ERIE IF OFFSHORE DRILLING WAS PERMITTED. HOWEVER, ATTENTION ON HAMMERMILL APPEARS TO HAVE RECEDED AFTER THE INJECTION WELL WAS REPAIRED.

VERY LITTLE COMMUNITY ATTENTION WAS FOCUSED ON THE SITE IN THE EARLY 1970'S. THE INJECTION WELLS WERE CAPPED BY 1972 AND DREW LITTLE

ATTENTION FROM THE PUBLIC.

UNCONFIRMED REPORTS INDICATE THAT ODORS AND DISCHARGES AT THE BEACH NO. 7 WELL MAY HAVE BEEN NOTICED AS EARLY AS 1970. HOWEVER, THE FIRST OFFICIAL COMPLAINT WAS NOT RECORDED UNTIL 1976 WHEN THE ERIE COUNTY HEALTH DEPARTMENT FILED A COMPLAINT WITH THE PRESQUE ISLE STATE PARK OFFICE. IN 1979, AN ABANDONED GAS WELL WAS UNCOVERED AND DISCOVERED TO BE LEAKING A FOUL SMELLING DISCHARGE INTO THE SURROUNDING SOIL. MUCH PUBLICITY SURROUNDED THIS DISCOVERY.

SUBSTANTIAL PRESS COVERAGE HAS BEEN PROVIDED ON THE PRESQUE ISLE SITE SINCE 1980. STATEMENTS THAT EMISSIONS FROM THE BEACH NO. 7 WELL MAY BE CONNECTED TO THE HAMMERMILL INJECTION WELLS WERE FIRST REPORTED IN 1980.

CURRENTLY, THERE IS ONLY A MODERATE LEVEL OF COMMUNITY AWARENESS OF THE PRESQUE ISLE SITE. MORE RECENT REPORTS HAVE CONCERNED A LAWSUIT FILED BY HAMMERMILL AGAINST EPA REGARDING INCLUSION OF THIS SITE ON THE NPL. HOWEVER, IF REGIONAL GROUND WATER CONTAMINATION OCCURS, OR LARGE AMOUNTS OF HYDROGEN SULFIDE GAS ARE FOUND TO BE LOCATED IN THE SUBSURFACE, COMMUNITY CONCERN COULD QUICKLY ESCALATE.

THREE RI/FS INFORMATION REPOSITORIES WERE OPENED IN THE PRESQUE ISLE AREA ON AUGUST 3, 1987. THE LOCATIONS INCLUDE THE PRESQUE ISLE STATE PARK OFFICE, THE ERIE COUNTY HEALTH DEPARTMENT AND THE ERIE COUNTY LIBRARY, PRESQUE ISLE BRANCH, WHICH ALSO CONTAINS THE ADMINISTRATIVE RECORD. A PUBLIC MEETING WAS HELD ON AUGUST 13, 1987 TO DISCUSS THE RI/FS AND EPA'S RECOMMENDED ALTERNATIVE. A 30-DAY PUBLIC COMMENT PERIOD WAS ALSO OPENED. ONE REQUEST TO EXTEND THE COMMENT PERIOD WAS GRANTED. THE PUBLIC COMMENT PERIOD CLOSED SEPTEMBER 18, 1987. THE RESPONSIVENESS SUMMARY LISTS ALL COMMENTS AND RESPONSES RELATED TO THIS PUBLIC COMMENT PERIOD.

#CSS
CURRENT SITE STATUS

THE BEACH NO. 7 WELL AT THE PRESQUE ISLE SITE APPEARS TO BE IN GOOD CONDITION. DURING A RECENT INSPECTION, NEITHER ODORS, DISCOLORED SAND, OR EVIDENCE OF STRESSED VEGETATION WERE OBSERVED. THE WELL IS TYPICAL OF MANY IN THE ERIE AREA, AND IT IS SURROUNDED BY A SMALL 4-FOOT HIGH WOODEN FENCE AND THE AREA IS COVERED WITH SAND. WHILE THE BASS ISLAND FORMATION WAS PLUGGED OFF IN THE BEACH NO. 7 WELL 5 YEARS AGO, THE FIRST 900 FEET FROM THE SURFACE DOWNWARD IN THIS WELL WAS NOT PLUGGED. THIS WELL CONTINUES TO PRODUCE NATURAL GAS FROM THE DEVONIAN SHALES ABOVE THE BASS ISLAND FORMATION. THE WELL IS EQUIPPED WITH A BLEED VALVE, METERS AND PRESSURE GAUGE IN ORDER TO CONTROL DISCHARGES.

THE CURRENT STATUS OF THE PRESQUE ISLE SITE HAS BEEN DISCUSSED WITH PADER OFFICIALS IN THE MEADVILLE OFFICE AND EPA HAS BEEN ADVISED THAT THERE HAVE BEEN NO CONFIRMED RELEASES OF HYDROGEN SULFIDE GAS SINCE THE BEACH NO. 7 WELL WAS PLUGGED IN OCTOBER 1982. PADER HAS INDICATED THAT ANY REPORTS OF FOUL-SMELLING ODORS DURING OIL AND GAS WELL DRILLING IN THE ERIE AREA WERE PROBABLY THE RESULT OF NATURALLY OCCURRING, SULFUROUS, AROMATIC HYDROCARBONS WHICH ARE TYPICALLY ASSOCIATED WITH NATURAL GAS.

PADER ALSO DISCUSSED THE CONSIDERABLE LOGISTICAL PROBLEM INVOLVED WITH CONFIRMING A HYDROGEN SULFIDE RELEASE. THE ERIE COUNTY DEPARTMENT OF HEALTH OR AN OIL AND GAS INSPECTOR MUST CALL THE BUREAU OF OIL AND GAS OFFICE, WHICH THEN MUST OBTAIN THE TEST EQUIPMENT FROM ANOTHER PADER BUREAU AND THEN GET THE EQUIPMENT TO THE OIL AND GAS INSPECTOR AT THE WELL. THE AMOUNT OF TIME REQUIRED IS USUALLY TOO GREAT TO ALLOW FOR PROPER MONITORING. THE FORMER ERIE OIL AND GAS INSPECTOR, MR. HARRY MACKIE, OFTEN REQUIRED THAT THE DRILLER HAVE MUD AVAILABLE TO IMMEDIATELY STEM THE FLOW OF HYDROGEN SULFIDE-BEARING GASES OR FLUIDS AS A SAFETY PRECAUTION. PADER'S BUREAU OF OIL AND GAS OFFICE IN MEADVILLE

CURRENTLY PERFORMS ROUTINE INSPECTIONS AT THE BEACH NO. 7 WELL.

IN JULY 1987, PADER'S HARRISBURG STATE PARKS MAINTENANCE OFFICE TESTED THE SAND AROUND THE BEACH NO. 7 WELL FOR ORGANIC COMPOUNDS AND FOUND NO INDICATION OF CONTAMINATION.

CONCLUSION

DISCUSSION

FOUR DISTINCT POSSIBILITIES CAN EXPLAIN THE SEEPAGE OF HYDROGEN SULFIDE-BEARING FLUIDS AT THE BEACH NO. 7 WELL ON PRESQUE ISLE: (1) HAMMERMILL'S SPENT PULPING LIQUOR OR ITS CONSTITUENTS WERE FORCED TO THE SURFACE UNDER INJECTION PRESSURE; (2) HAMMERMILL'S SPENT PULPING LIQUOR OR ITS CONSTITUENTS WERE FORCED TO THE SURFACE UNDER NATURAL ARTESIAN PRESSURE AFTER MIGRATING TO THE AREA; (3) A NATURALLY OCCURRING BASS ISLAND FORMATION BRINE WAS FORCED TO THE SURFACE UNDER HAMMERMILL'S INJECTION PRESSURE; OR, (4) THE SEEPAGE WAS WHOLLY A NATURAL PHENOMENON.

THE FIRST TWO POSSIBILITIES CANNOT BE CONCLUSIVELY SUPPORTED BY THE AVAILABLE CHEMICAL EVIDENCE. SAMPLE CONTAMINATION, ANALYTICAL PROBLEMS, GEOCHEMICAL COMPLEXITY, APPROPRIATE BACKGROUND COMPARISON CRITERIA, AND THE GREAT AMOUNTS OF TIME AND DISTANCES INVOLVED MAKE THE CHEMICAL ISSUE PROBLEMATIC. EVEN ADDITIONAL MONITORING WELLS AND FURTHER SAMPLING WOULD PROBABLY NOT RESOLVE MANY OF THESE ISSUES. CHEMICAL EVIDENCE INDICATES THAT EVEN IF THE PULPING LIQUOR WAS PRESENT IN ANY OF THE PREVIOUS ANALYSES, IT WOULD HAVE BEEN DILUTED GREATLY, BEYOND THE LEVEL OF STATISTICAL OBSERVATION.

THE SECOND TWO SCENARIOS ARE CONCEPTUALLY MORE SIMPLE, BUT THE ANSWERS ARE NO MORE CLEAR. HAMMERMILL HAS PRESENTED EVIDENCE THAT THE BASS ISLAND FORMATION COULD CONCEIVABLY FLOW UNDER ITS OWN ARTESIAN PRESSURE, BUT THIS HYPOTHESIS IS LARGELY UNPROVABLE FOR THE ERIE AREA BECAUSE THE HAMMERMILL INJECTION PROGRAM HAS ALTERED THE NORMAL HYDROGEOLOGIC REGIME. THE INJECTED PULPING LIQUOR WILL PROBABLY MIGRATE FROM THE AREA IN WHICH IT WAS INJECTED. THE RATE AND EXTENT OF THE MIGRATION CANNOT BE ESTIMATED WITHOUT ACQUIRING SOME SITE-SPECIFIC INFORMATION ABOUT THE FORMATION'S HYDROSTATIC HEAD. THREE OR MORE OBSERVATION WELLS WOULD HAVE TO BE INSTALLED IN THE BASS ISLAND FORMATION TO GENERATE SUFFICIENT INFORMATION ON THE HYDROSTATIC SURFACE OF THE BASS ISLAND FORMATION. THESE WELLS COULD ALLOW THE MEASUREMENT OF THE POTENTIOMETRIC HEAD IN THE FORMATION AND THE PERIODIC COLLECTION OF SAMPLES OF FORMATION FLUID.

SUCH INFORMATION WOULD ENABLE A MORE ACCURATE PROJECTION OF WHETHER FUTURE PROBLEMS MAY OCCUR, BUT IT WOULD NOT NECESSARILY RESOLVE THE LACK OF CLEAR CHEMICAL AND GEOLOGIC EVIDENCE OF THE EXISTENCE OR NONEXISTENCE OF A LINK BETWEEN THE SEEPAGE OF FLUID AT THE BEACH NO. 7 WELL AND THE HAMMERMILL WASTE INJECTION PROGRAM.

IN HAMMERMILL'S MOST SOPHISTICATED RESERVOIR MODELING AND THE MODELING OF ALL OTHER INVESTIGATORS ON BOTH SIDES OF THE ARGUMENT, IT WAS NOTED THAT THE HAMMERMILL INJECTION PROGRAM COULD HAVE SUBSTANTIALLY RAISED THE FORMATION PRESSURE AT THE BEACH NO. 7 WELL. HAMMERMILL'S RESERVOIR MODELING INCLUDES BOTH THE ARTESIAN FLOW ARGUMENT AND THE PRESSURE DRIVE ARGUMENT IN THE SAME DOCUMENT. THE MOST PROVABLE CONCLUSION IS THAT, AT A MINIMUM, THE HAMMERMILL INJECTION PROGRAM FORCED A NATURALLY OCCURRING FLUID THAT WAS NEAR THE SURFACE FROM THE BEACH NO. 7 WELL.

#ENF
ENFORCEMENT STATUS

AT THE PRESENT TIME HAMMERMILL IS THE ONLY WASTE GENERATOR WHO COULD BE LINKED TO THE SITE AS A POTENTIALLY RESPONSIBLE PARTY. HOWEVER, THE INJECTION OF PULPING WASTES HAS NOT BEEN CONCLUSIVELY

LINKED TO THE DISCHARGE AT THE BEACH NO. 7 WELL. HAMMERMILL HAS ARGUED THAT THIS DISCHARGE IS EXEMPTED BY CERCLA FROM BEING CONSIDERED AS A RELEASE AND CONSEQUENTLY FOR INCLUSION ON THE NPL BECAUSE THE DISCHARGE WAS A NATURAL FLUID. IN ADDITION, EVEN IF THE FLUID IS IDENTIFIED AS HAMMERMILL'S, HAMMERMILL HAS ARGUED THAT IT MIGHT AGAIN BE EXEMPTED UNDER CERCLA SINCE IT WAS FROM A STATE PERMITTED DISPOSAL OPERATION.

#AE

ALTERNATIVE EVALUATION

THE MAJOR OBJECTIVES OF ANY REMEDIAL ACTIONS TO BE TAKEN AT THE PRESQUE ISLE SUPERFUND SITE INCLUDE (1) PREVENT/MINIMIZE DIRECT HUMAN EXPOSURE TO GASEOUS AND LIQUID WASTES FROM UNCONTROLLED DISCHARGES, AND (2) PREVENT/MINIMIZE POTENTIAL CONTAMINATION OF SURFACE AND GROUND WATER BY PRESSURE FLOW THROUGH FRACTURES, GAS AND OIL WELLS, OR OTHER PATHWAYS.

BASED ON THE ABOVE OBJECTIVES, SEVERAL SOURCE CONTROL AND MITIGATION CONTROL TECHNOLOGIES WERE SCREENED TO PROVIDE A LIMITED NUMBER OF TECHNOLOGIES APPLICABLE FOR REMEDIAL ACTIONS AT THE SITE. SOME OF THESE TECHNOLOGIES WERE REMOVED FROM FURTHER CONSIDERATION BASED ON SITE-SPECIFIC INFORMATION AND OTHER COMPARATIVE CRITERIA. THESE OTHER CRITERIA INCLUDE:

- TECHNICAL PERFORMANCE/RELIABILITY
- CONSTRUCTIBILITY
- HEALTH AND ENVIRONMENTAL IMPACTS
- INSTITUTIONAL CONSIDERATION.

EACH TECHNOLOGY WAS EVALUATED NOT ONLY IN TERMS OF THEORETICAL FEASIBILITY, BUT ALSO IN TERMS OF WHETHER THE TECHNOLOGY IS APPLICABLE TO THE SITE SPECIFIC CONDITIONS. THE CANDIDATE TECHNOLOGIES THAT WERE DISMISSED FROM RETENTION ARE PRESENTED BELOW WITH THE JUSTIFICATION FOR ELIMINATION.

TECHNOLOGY	REASON(S) FOR ELIMINATION
- REMOVING HAMMERMILL DEEP-WELL INJECTED WASTE FROM BASS ISLAND FORMATION	NOT IMPLEMENTABLE. WASTES HAVE PROBABLY MIGRATED FROM THE POINT OF INJECTION THROUGH FRACTURES AND ARE THEREFORE UNRECOVERABLE.
- IDENTIFYING, INVESTIGATING AND PLUGGING (IF REQUIRED) ALL ABANDONED OIL AND GAS WELLS IN ERIE COUNTY.	HIGH COST; NOT EFFECTIVE SINCE MANY OF THESE WELL LOCATIONS ARE UNKNOWN. ALSO, THE NUMBER OF WELLS INVOLVED ARE IN THE THOUSANDS.

THE TECHNOLOGIES THAT HAVE BEEN RETAINED FOR FURTHER ANALYSIS CAN BE GROUPED INTO THE FOLLOWING FOUR ALTERNATIVES:

- DEPRESSURIZE BASS ISLAND FORMATION
- INSTALLATION OF MONITORING WELLS IN BASS ISLAND FORMATION TO DETERMINE SEEPAGE ORIGIN
- INSTALLATION OF MONITORING WELLS IN BASS ISLAND FORMATION TO PREDICT THE POTENTIAL MIGRATION PATHWAY OF HAMMERMILL'S INJECTED WASTE
- NO ACTION.

TO ANALYZE THESE ALTERNATIVES, AN EVALUATION WAS CONDUCTED THAT CONSIDERED THE NEW REQUIREMENTS OF THE SUPERFUND AMENDMENTS AND

REAUTHORIZATION ACT OF 1986 (SARA) AND THE CURRENT VERSION OF THE NATIONAL CONTINGENCY PLAN (NCP) (50 FED. REG. 47912, NOVEMBER 20, 1985). THREE BROAD CATEGORIES WERE USED FOR THE EVALUATION: EFFECTIVENESS, IMPLEMENTABILITY, AND COST. WITHIN THESE CATEGORIES THERE ARE SEVEN FACTORS THAT CONSIDER THE SHORT-TERM AND LONG-TERM EFFECTS OF EACH ALTERNATIVE (SEE TABLE 2).

ALTERNATIVE 1. - DEPRESSURIZE BASS ISLAND FORMATION

THIS ALTERNATIVE WOULD BE A VERY DIFFICULT UNDERTAKING. THE EFFECTIVENESS OF THIS ACTION WOULD BE LIMITED BECAUSE, BASED ON CALCULATIONS, PRESSURES IN THE BASS ISLAND FORMATION AT THE HAMMERMILL INJECTION SITE HAVE PROBABLY RETURNED TO NATURAL CONDITIONS (I.E., NO UNUSUAL PRESSURES TO BE RELEASED). THERE WOULD BE ENVIRONMENTAL AND PUBLIC HEALTH RISKS ASSOCIATED WITH DRILLING SUCH WELLS BECAUSE SULFUR WATER COULD BE ENCOUNTERED, H₂S GAS COULD BUILD UP TO SIGNIFICANT LEVELS WHILE THE WELL WAS CAPPED BETWEEN TESTS AND RELEASES TO THE AIR, GROUND WATER, SURFACE WATER AND SOIL COULD OCCUR.

TO DRILL SUCH A WELL WOULD COST \$150,000 EACH AND DEPRESSURIZING THE FORMATION WOULD REQUIRE A FACILITY TO TREAT THE FORMATION FLUIDS THAT FLOW BACK. SUCH A FACILITY WOULD HAVE TO BE IMMENSE IN ORDER TO TREAT THE 1.1 BILLION GALLONS OF INJECTED PULPING LIQUORS. IT WOULD HAVE TO OPERATE FOR MANY YEARS, ESPECIALLY CONSIDERING THAT THE PULPING LIQUOR MAY HAVE BEEN DILUTED 10 TO 200 TIMES BY THE NORMAL FORMATION FLUIDS. ADDITIONALLY, THE NATURAL FORMATION FLUIDS IN THE UNDERLYING LOCKPORT FORMATION ARE JUST AS HAZARDOUS (SEE TABLE 3) AND PRESENT FEW PROBLEMS TO EXPERIENCED OIL AND GAS WELL DRILLERS. THUS FAR, THE ONLY RECEPTORS THAT HAVE BEEN IDENTIFIED AS AT RISK SINCE THE PLUGGING OF THE BEACH NO. 7 WELL ARE THE ONES NEAR THE OIL AND GAS WELL DRILLING RIGS THAT ARE ACTIVELY DRILLING THROUGH THE BASS ISLAND FORMATION.

ALTERNATIVE 2. - INSTALLATION OF MONITORING WELLS IN THE BASS ISLAND FORMATION

TO ATTEMPT TO CONCLUSIVELY DEFINE THE SOURCE OF THE PRESQUE ISLE DISCHARGE, DRILLING AN UNESTIMATED NUMBER OF WELLS INTO THE BASS ISLAND FORMATION WOULD BE INVOLVED. EACH WELL WOULD COST APPROXIMATELY \$150,000. IF CORES OF THE FORMATION WERE COLLECTED, THE COST PER WELL WOULD INCREASE BY AT LEAST \$50,000. IT IS UNCLEAR WHETHER ANY ADDITIONAL DATA OBTAINED FROM THESE WELLS WOULD PROVIDE CONCLUSIVE INFORMATION REGARDING THE SOURCE OF THE PRESQUE ISLE DISCHARGE. FURTHERMORE, THERE WOULD BE ENVIRONMENTAL AND PUBLIC HEALTH RISKS ASSOCIATED WITH DRILLING SUCH WELLS BECAUSE SULFUR WATER COULD BE ENCOUNTERED, H₂S GAS COULD BUILD UP TO SIGNIFICANT LEVELS WHILE THE WELLS WERE CAPPED BETWEEN TESTS, AND RELEASES OF THIS GAS AND FORMATION FLUIDS TO THE AIR, GROUND WATER, SURFACE WATER, AND SOIL COULD OCCUR.

ALTERNATIVE 3. - INSTALLATION OF MONITORING WELLS IN THE BASS ISLAND FORMATION TO PREDICT THE POTENTIAL MIGRATION PATHWAY OF HAMMERMILL'S INJECTED WASTE

INSTALLATION OF MONITORING WELLS IN THE BASS ISLAND FORMATION NEAR THE THREE HAMMERMILL INJECTION WELLS AND SUBSEQUENT MONITORING WOULD POTENTIALLY PROVIDE INFORMATION ON THE POTENTIOMETRIC SURFACE OF THE BASS ISLAND FORMATION AND POSSIBLY BE USED TO PREDICT THE POTENTIAL MIGRATION PATHWAY OF HAMMERMILL'S INJECTED WASTE. THIS WOULD BE AN EXPENSIVE UNDERTAKING SINCE A MINIMUM OF THREE POINTS WOULD BE REQUIRED TO MAKE ANY CONCLUSIONS ABOUT HYDROSTATIC LEVEL. IDEALLY, MANY MORE THAN THREE POINTS WOULD BE REQUIRED FOR A TRUE DETERMINATION. EACH WELL INSTALLATION WOULD COST A MINIMUM OF \$150,000. THE HAMMERMILL INJECTION PROGRAM HAS ALTERED THE NORMAL HYDROGEOLOGIC REGIME IN THE ERIE AREA AND THERE IS THE POSSIBILITY THAT THE BASS ISLAND FORMATIONS' POTENTIOMETRIC SURFACE COULD NOT BE ESTABLISHED TO BE REPRESENTATIVE OF THE AREA AFFECTED.

IN ADDITION, THERE WOULD BE ENVIRONMENTAL AND PUBLIC HEALTH RISK ASSOCIATED WITH DRILLING SUCH WELLS BECAUSE SULFUR WATER COULD BE ENCOUNTERED, H₂S GAS COULD BUILD UP TO SIGNIFICANT LEVELS WHILE THE

WELLS WERE CAPPED BETWEEN TESTS, AND RELEASES OF THIS GAS AND FORMATION FLUIDS TO THE AIR, GROUND WATER, SURFACE WATER, AND SOIL COULD OCCUR.

ALTERNATIVE 4. - NO ACTION

THE BASS ISLAND FORMATION WITHIN THE BEACH NO. 7 WELL WAS PERMANENTLY PLUGGED IN 1982. SINCE THAT TIME, NO DISCHARGE HAS BEEN OBSERVED OR REPORTED FROM THAT WELL OR ANY OTHER WELL IN NORTHERN ERIE COUNTY. THEREFORE, AT THE PRESENT TIME, EPA IN CONJUNCTION WITH PADER HAS DETERMINED THAT NO FURTHER REMEDIAL MEASURES ARE APPROPRIATE. BASED ON REMEDIAL INVESTIGATIONS PERFORMED BY BOTH EPA AND PADER WHICH INDICATED THAT NO SIGNIFICANT CONTAMINATION FROM THE BEACH NO. 7 WELL DISCHARGE HAS BEEN DETECTED IN THE AIR, SURFACE WATER, GROUND WATER, OR SOIL, EPA IN CONSULTATION WITH PADER, HAS DETERMINED THAT THE RELEASE POSES NO SIGNIFICANT THREAT TO PUBLIC HEALTH OR THE ENVIRONMENT. THIS DETERMINATION HAS TAKEN INTO CONSIDERATION ALL APPLICABLE OR RELEVANT AND APPROPRIATE FEDERAL AND STATE ENVIRONMENTAL REQUIREMENTS.

THE FACTORS IN THIS CATEGORY DO NOT REQUIRE AN IMPLEMENTABILITY AND COST ANALYSIS SINCE THERE ARE NO IMPLEMENTATION ISSUES OR COSTS ASSOCIATED WITH TAKING NO ACTION.

#RA

RECOMMENDED ALTERNATIVE

SECTION 121 OF THE SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (SARA) AND THE CURRENT VERSION OF THE NATIONAL CONTINGENCY PLAN (NCP) (50 FED. REG. 47912, NOVEMBER 20, 1985) ESTABLISH REQUIREMENTS RELATING TO THE LEVEL OF CLEANUP FOR REMEDIAL ACTIONS UNDER CERCLA. APPLYING THE CURRENT EVALUATION CRITERIA IN TABLE 2 TO THE FOUR REMAINING REMEDIAL ALTERNATIVES, WE RECOMMEND THAT ALTERNATIVE 4 BE IMPLEMENTED AT THE PRESQUE ISLE SUPERFUND SITE.

THE RESULTS OF ALL STUDIES CONDUCTED ON THE PRESQUE ISLE SITE TO DATE HAVE BEEN ANALYZED IN THE REMEDIAL INVESTIGATION/FEASIBILITY STUDY (RI/FS) REPORT TITLED "SUMMARY OF INVESTIGATIONS AND RECOMMENDATIONS FOR FURTHER ACTION" (SCHOENER-EPA, 10/85). AVAILABLE CHEMICAL DATA PROVIDE AMBIGUOUS INFORMATION ABOUT THE SOURCE OF THE DISCHARGE AND SUGGEST THAT RESOLUTION OF THESE AMBIGUITIES AT THIS TIME IS IMPOSSIBLE. INVESTIGATIONS, HOWEVER, HAVE DETERMINED THAT THE DISCHARGE AT PRESQUE ISLE BEACH NO. 7 WELL WAS AN UNUSUAL EVENT, AND THAT THE THREAT TO THE PUBLIC WAS ELIMINATED WHEN THE BASS ISLAND FORMATION WITHIN THIS WELL WAS PERMANENTLY PLUGGED IN 1982. AS A RESULT, THE ONLY KNOWN SOURCE OF THE SEEPAGE HAS BEEN CAPPED. POTENTIAL FOR DIRECT EXPOSURE HAS ALSO BEEN MINIMIZED BY COVERING THE PAST SEEPAGE WITH FRESH SAND AND THERE ARE NO DRINKING WATER WELLS IN USE ON THE PENINSULA. NO MIGRATION PATHWAYS HAVE BEEN RECOGNIZED AND, BASED ON CURRENT INFORMATION, NO SIGNIFICANT CONTAMINATION IS PRESENT AT OR ADJACENT TO THE BEACH NO. 7 WELL.

DELETION OF PRESQUE ISLE SITE FROM NPL

"NO ACTION" SITES ARE CONSIDERED AS COMPLETIONS ONCE THE DETERMINATION IS MADE THAT NO FURTHER REMEDIAL ACTIONS ARE NECESSARY TO BE PROTECTIVE OF PUBLIC HEALTH AND THE ENVIRONMENT AND THE NO-ACTION ROD IS APPROVED. ONCE A SITE IS CONSIDERED AS A COMPLETION IT BECOMES A CANDIDATE FOR DELETION FROM THE NPL. THE DELETION PROCESS IS SEPARATE FROM THE ROD ACTION AND INVOLVES SEVERAL STEPS INCLUDING PUBLIC NOTICES AND DELETION DOCKET PREPARATION.

DELETION OF A SITE FROM THE NPL DOES NOT PRECLUDE ELIGIBILITY FOR SUBSEQUENT FUND-FINANCED OR PRP ACTIVITIES. SECTION 300.66(C)(8) OF THE NCP STATES THAT FUND-FINANCED RESPONSE ACTIONS MAY BE TAKEN AT SITES THAT HAVE BEEN DELETED FROM THE NPL IF FUTURE CONDITIONS WARRANT SUCH ACTIONS.

RECOMMENDATIONS OUTSIDE THE SCOPE OF THE PRESQUE ISLE ROD

DURING THE PRESQUE ISLE SITE INVESTIGATIONS, EPA AND PADER BECAME AWARE THAT OIL AND GAS WELL DRILLERS IN THE ERIE AREA GENERALLY BELIEVE THAT THE BASS ISLAND FORMATION FLUID IS A CLEAR BRINE. AS A CONSEQUENCE THE FOLLOWING RECOMMENDATIONS, IF IMPLEMENTED, SHOULD MINIMIZE FURTHER PROBLEMS OR RELEASES ASSOCIATED WITH NATURAL FORMATION BRINES:

- 1) LOCAL OIL AND GAS DRILLERS SHOULD BE NOTIFIED THAT HYDROGEN SULFIDE-BEARING BRINES ARE PRESENT IN THE BASS ISLAND AND LOCKPORT FORMATIONS, AND THAT A POTENTIAL FOR RELEASE OF HYDROGEN SULFIDE-GAS EXISTS, AND
- 2) FUTURE OIL AND GAS WELLS DRILLED THROUGH THE BASS ISLAND AND LOCKPORT FORMATIONS SHOULD BE MONITORED FOR HIGH PRESSURES AND THE OCCURRENCE OF HYDROGEN SULFIDE RELEASES TO IDENTIFY AREAS POTENTIALLY REQUIRING MORE SAFETY MEASURES WHILE DRILLING TAKES PLACE.

BOTH OF THESE RECOMMENDATIONS SHOULD BE IMPLEMENTED BY THE APPROPRIATE STATE AGENCY. EPA WILL NOTIFY THE SURROUNDING STATES AND CANADA, WHERE THE BASS ISLAND FORMATION IS ALSO PRESENT, OF OUR RECOMMENDATIONS. STATE PROGRAMS COULD BE ESTABLISHED TO SET UP A MONITORING PROGRAM TO EXPAND THESE RECOMMENDATIONS.

THE PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES HAS CONCLUDED THAT BECAUSE STATE LAW REQUIRES DRILLERS TO GIVE 24-HOUR NOTICE BEFORE DRILLING BEGINS AND IT WAS ALREADY THE POLICY OF THE STATE BUREAU OF OIL AND GAS MEADVILLE OFFICE TO HAVE THE LOCAL OIL AND GAS INSPECTOR PRESENT WHEN THE BASS ISLAND FORMATION IS PENETRATED, IT WOULD NOT BE NECESSARY TO INCORPORATE THESE PROVISIONS INTO PADER'S OIL AND GAS WELL DRILLING PERMITTING PROCESS.

PADER HAS ALSO DETERMINED THAT MONITORING FUTURE DRILLING WITH SOME SORT OF HYDROGEN SULFIDE TESTING EQUIPMENT WOULD APPROPRIATELY PROTECT THE SURROUNDING POPULATION.

#TMA
TABLES, MEMORANDA, ATTACHMENTS

COMMONWEALTH OF PENNSYLVANIA

DEPARTMENT OF ENVIRONMENTAL RESOURCES

MR. THOMAS VOLTAGGIO, CHIEF
SUPERFUND BRANCH
U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION III
841 CHESTNUT BUILDING
PHILADELPHIA, PA 19107

DEAR MR. VOLTAGGIO:

THE DRAFT RECORD OF DECISION FOR ALTERNATIVE REMEDIAL MEASURES AT THE PRESQUE ISLE SUPERFUND SITE HAS BEEN REVIEWED BY DER STAFF MEMBERS. THE DEPARTMENT CONCURS WITH EPA'S ASSESSMENT OF THE SELECTED REMEDY. NO ADDITIONAL REMEDIAL ACTIONS UNDER CERCLA ARE REQUIRED AT THE PRESQUE ISLE SITE TO PROTECT THE PUBLIC HEALTH, WELFARE AND THE ENVIRONMENT.

I WISH TO THANK YOU AND YOUR STAFF FOR YOUR COOPERATION WITH THE DEPARTMENT DURING PAST WORK AT THIS SITE. IF YOU HAVE ANY QUESTIONS CONCERNING THIS MATTER, PLEASE DO NOT HESITATE TO CONTACT MR. MARK GORMAN OR MYSELF.

SINCERELY,

MARK M. MCCLELLAN
DEPUTY SECRETARY
ENVIRONMENTAL PROTECTION.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

SUBJECT: PRESQUE ISLE ROD

DATE: SEP 30 1987

FROM: ROBERT E. GREAVES, ACTING CHIEF
WASTE MANAGEMENT BRANCH (3HW30)

TO: BRUCE SMITH, CHIEF
HAZARDOUS WASTE ENFORCEMENT BRANCH (3HW10)

THE WELL AT BEACH NO. 7 WAS PLUGGED WITH CONCRETE IN 1982. SINCE THEN, NO SIGNIFICANT CONTAMINATION WAS FOUND. IT IS SUGGESTED THAT PA DER MONITOR FOR H2S AT THE WELL TO ENSURE THAT THE PLUGGED CONCRETE DOES NOT SHRINK OR CRACK.

THE PROBABLE LEVEL OF EARTHQUAKE SHAKING IN THE AREA IS ABOVE THAT WHICH WOULD CAUSE GEOLOGIC DEFORMATION. THEREFORE, IN THE PARAGRAPH "RECOMMENDATIONS OUTSIDE THE SCOPE OF THE PRESQUE ISLE ROD", IT SHOULD BE ADDED THAT PA DER SHOULD MONITOR H2S IN THE NEARBY AREA AFTER A NOTABLE EARTHQUAKE OCCURS.

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SARA ADMINISTRATION RECORD *
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 - 2) LETTER TO MS. LINDA BOORNAZIAN FROM MR. BRUCE PLUTA AND MR. DONALD SENOVICH RE: RECOMMENDATIONS TO U.S. EPA FOLLOWING A QUALITY ASSURANCE AND TOXICOLOGICAL REVIEW, 5/2/83.
 - 3) REPORT: FINAL REPORT OF THE SITE INSPECTION OF THE ERIE COUNTY WELLS PREPARED UNDER TDD NO. F3-8212-12, 5/2/83.
 - 4) MEMORANDUM OF CALL FROM MR. ROBIE RE: FILTERS AND EQUIPMENT FUNCTIONING, 4/25/83.
 - 5) LETTER TO MR. ED SHOENER FROM MR. D. LEONARD KOEDERITZ RE: DEEP WELL INJECTION PRESSURE, 4/21/83.
 - 6) LETTER TO MR. D.L. KOEDERITZ FROM MR. R. ZIELINSKI RE: MAP TRANSMITTAL, 4/18/83. MAPS ARE ATTACHED TO THE LETTER.
 - 7) MEMORANDUM RE: SAMPLING OF WASTE FLUID FROM FOUR STORAGE TANKS, 4/14/83.
 - 8) LETTER TO DR. LEONARD KOEDERITZ FROM MR. JOHN WALKER RE: FRACTURE TRACE MAP TRANSMITTAL, 4/8/83.
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 - 11) LETTER TO MR. BENTON WILMOTH FROM MR. CHARLES ROBIE RE: CERTIFICATES OF ANALYSIS ON GAS FROM SCHOOL DISTRICT WELL, 4/7/83. MAP AND CERTIFICATES OF ANALYSIS ARE ATTACHED TO THE LETTER.
 - 12) MEMORANDUM TO MR. ANDY MCERLEAN FROM MR. ED SHOENER RE: SPECIAL ANALYTICAL REPORT, 4/6/83. LETTER REGARDING D'APPOLONIA, AND TWO LETTERS REGARDING ASSISTANCE REQUEST ARE ATTACHED TO THE MEMORANDUM.
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- 13) LETTER TO MR. RUSSELL WYER FROM MR. JAMES ROGERS RE: D'APPOLONIA'S WORK AT THE SITE, 4/4/83.
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- 24) LETTER TO MR. TRUMAN ANDREWS FROM MR. EDWARD SHOENER RE: FACILITY DEFINITION, 3/8/83.
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- 89) MEMORANDUM TO MR. J. ROY MURPHY FROM MR. STEPHEN WASSERSUG RE: REQUEST FOR USGS ASSISTANCE, 7/2/82. LETTER REGARDING REQUEST FOR

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- 101) LETTER TO MR. LEONARD KOEDERITZ FROM MR. CHARLES KLEEMAN RE: TRANSMITTAL OF INFORMATION REGARDING PRESSURE DECLINE CALCULATIONS, 4/30/82. MEMORANDUM IS ATTACHED TO THE LETTER.
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- 115) MEMORANDUM TO MR. CARLYLE WESTLUND FROM MR. ARTHUR SOCOLOW RE:
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MORE POLLUTANTS FOUND IN SULFUR WATER FLOWING FROM OLD UNPLUGGED
WELL AT BEACH #7, 11/27/79.
- 134) MEMORANDUM TO REGIONAL HYDROLOGIST FROM SUBDISTRICT CHIEF RE:
ATLANTA CENTRAL LAB -- SPECIAL ANALYSIS, 11/8/79. ADDITIONAL
MEMORANDUMS AND LAB INFORMATION ATTACHED.
- 135) MEMORANDUM TO THE RECORD FROM MR. DAVID E. RICHARDS RE: VISIT
TO PRESQUE ISLE, 11/1/79.
- 136) CHRONOLOGY OF EVENTS AND DOCUMENTS RELATING TO BEACH #7 WELL,
PRESQUE ISLE STATE PARK, PA., 10/79.
- 137) MEMORANDUM TO E. FUND FROM MR. JOHN T. WALKER RE: NEWSPAPER
ARTICLES ON OLD UNPLUGGED WELL AND NEW WELL, 9/19/79.
- 138) LETTER TO MR. KENNETH YOUNG FROM T.O. ANDREWS RE: TRANSMITTAL
OF EVALUATION OF THE POTENTIAL FOR PULP LIQUOR MIGRATION AND
SEEPAGE FROM THE PRESQUE ISLE STATE PARK GAS WELL, 7/19/79.
- 139) HANDWRITTEN NOTES ON CALCULATED BOTTOM HOLE INJECTION PRESSURES,
6/1/79. ARTICLE ON CALCULATION OF FRICTION AND TREATING PRESSURES
IN PIPE IS ATTACHED.
- 140) MEMORANDUM TO CARLYLE W. WESTLUND FROM MR. JOHN T. WALKER RE:
PAPERMAKING CHEMICALS AND WASTES IN SULFUR WATER FLOWING FROM OLD
WELL AT BEACH #7, 5/10/79. ATTACHMENTS 1 THROUGH 8 ARE INCLUDED.
- 141) DATA ROCK FORMATIONS, 5/2/79. INSPECTION REPORTS ARE
ATTACHED TO THE LETTER.
- 142) MEMORANDUM TO MR. EUGENE FRUND FROM MR. JOHN T. WALKER RE:
MEETING WITH HAMMERMILL PAPER COMPANY, 4/23/79. DATA INFORMATION
ATTACHED.
- 143) MEMORANDUM TO MR. EUGENE FRUND FROM MR. JOHN T. WALKER RE:
RECENTLY ACQUIRED DATA AND CONCLUSIONS ON SOURCE OF FOUL-SMELLING
FLUID FLOWING FROM OLD GAS WELL AT BEACH #7, 4/12/79.
- 144) MEMORANDUM TO MR. JOHN T. WALKER FROM MR. ROBERT G. PIOTROWSKI RE:
CORRECTED WELL LOCATION, 3/1/79. MAPS ARE ATTACHED TO THE MEMORANDUM.
- 145) MEMORANDUM TO MR. JOHN T. WALKER FROM MR. EUGENE FRUND RE:
FOUL-SMELLING SEEP AT BEACH #7, 1/19/79. ATTACHMENTS 1 THROUGH 3
ARE ATTACHED TO THE MEMORANDUM.
- 146) COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES
BIDDER'S CONTRACT COMPLIANCE INSTRUCTION SHEET, 12/13/77.
- 147) TASK REPORT, 10/24/72.

- 148) MEMORANDUM TO CARLYLE W. WESTLUND FROM MR. ROBERT W. STALLBAUM
RE: INDUSTRIAL WASTES HAMMERMILL, 9/8/72.
- 149) LETTER TO MR. T.O. ANDREWS FROM CARLYLE W. WESTLUND RE: WELL
HISTORY DATA AND PLUGGING PROCEDURES, 8/8/72.
- 150) LETTER TO MR. CARLYLE W. WESTLUND FROM HAMMERMILL PAPER COMPANY
RE: HISTORY OF WELLS AND PLANNED PLUGGING PROCEDURES, 6/28/72.
- 151) LETTER TO MR. CARLYLE WESTLUND FROM MR. T.O. ANDREWS RE:
REQUESTED INFORMATION, 4/11/72.
- 152) LETTER TO HAMMERMILL PAPER COMPANY FROM COMMONWEALTH OF
PENNSYLVANIA RE: I.W. PERMIT NO. 368I006, 7/7/70.
- 153) LETTER TO HAMMERMILL PAPER COMPANY FROM COMMONWEALTH OF
PENNSYLVANIA RE: I.W. PERMIT NO. 36515, 1/7/70.
- 154) LETTER TO HAMMERMILL PAPER COMPANY FROM COMMONWEALTH OF
PENNSYLVANIA RE: I.W. PERMIT NO. 368I006, 2/25/69.
- 155) LETTER TO HAMMERMILL PAPER COMPANY FROM COMMONWEALTH OF
PENNSYLVANIA RE: I.W. PERMIT NO. 36515, 2/25/69.
- 156) LETTER TO HAMMERMILL PAPER COMPANY FROM COMMONWEALTH OF
PENNSYLVANIA RE: I.W. PERMIT NO. 3681008, 7/11/68.
- 157) COMMONWEALTH OF PENNSYLVANIA INDUSTRIAL WASTES PERMIT
NO. 3333681008, 7/11/68.
- 158) FACT SHEET: INDUSTRIAL WASTES HAMMERMILL PAPER COMPANY, 7/2/68.
- 159) OATH OF PUBLICATION OF NOTICE, 6/14/68.
- 160) APPLICATION FOR TREATMENT OR DISCHARGE OF INDUSTRIAL WASTES,
5/24/68.
- 161) APPLICATION FOR TREATMENT OR DISCHARGE OF INDUSTRIAL WASTES,
5/17/68.
- 162) HAMMERMILL SURVEY, 12/26/66.
- 163) LETTER TO MR. LARRY MILLER FROM MR. R.W. BROWN RE: SAMPLING,
12/9/66. EXCERPT FROM "DEEP WELL DISPOSAL OF SPENT HARDWOOD
PULPING LIQUOR," BY R.W. BROWN AND C.W. SPAULDING, IS
ATTACHED TO THE LETTER.
- 164) REPORT: WELL REPORT AT HAMMERMILL #1 DISPOSAL WELL, 8/23/63.
- 165) LETTER TO MR. CLAYTON SCHULZE FROM UNKNOWN RE: DEEP WELL DISPOSAL,
7/12/63. REPORT ENTITLED PROPOSED DISPOSAL OF PULPING WASTES
INTO HAMMERMILL NO. 3 DEEP WELL, AND LETTER REGARDING DEEP WELL
INJECTION ARE ATTACHED TO THE LETTER.
- 166) DELEGATION BRIEFING (UNDATED).
- 167) LIST OF POLLUTANTS FROM PAPER MILL EFFLUENTS (UNDATED).
- 168) REPORT: HAMMERMILL #1 RATE OF INCREASE OF INJECTION FRONT FOR
EQUI-DISTANT PERIPHERY (UNDATED).
- 169) FLAMMABILITY/REACTIVITY AND TOXICITY/CARCINOGENITY
FACT SHEET (UNDATED).
- 170) MEMORANDUM TO MR. PAUL HORVATIN FROM MR. ROGER CLAFF RE: LAB
REPORTS (UNDATED).

- 171) LETTER TO OIL AND GAS OPERATORS IN NORTHERN ERIE COUNTY FROM MR. JOHN IFFT RE: APPLICATIONS FOR DRILLING PERMITS (UNDATED).
- 172) APPLICATION FOR PRE-QUALIFICATION OF COMPLIANCE WITH THE CONTRACT COMPLIANCE REGULATIONS (UNDATED).
- 173) MAPS DEPICTING PRESQUE SITE AND SURROUNDING AREAS (UNDATED).
- 174) WELL MONITORING NOTES TAKEN BY MR. ED SHOENER (UNDATED).
- 175) LETTER TO MR. ED SHOENER FROM MR. ART (ILLEGIBLE) RE: TRANSMITTAL OF WELL REPORTS (UNDATED).
- 176) RECORD OF COMMUNICATION TO MR. ED SHOENER FROM MR. JOHN WALKER RE: LOG OF PLUGGING (UNDATED).
- 177) TECHNICAL SPECIFICATION FOR PLUGGING WELL ON BEACH 7 (UNDATED).

REMEDIAL RESPONSE PLANNING

- 1) REPORT: RECORDS COMPILATION PRESQUE ISLE STATE PARK, ERIE PA, SUBMITTED BY VERSAR INC., 8/3/87.
- 2) REPORT: DRAFT REPORT DOCUMENT LIST FOR PRESQUE ISLE RECORD COMPILATION, PRESQUE ISLE STATE PARK, PREPARED BY VERSAR INC., 6/16/87.
- 3) MEMORANDUM TO REGIONAL ADMINISTRATORS OF EPA REGIONS III AND VI FROM MR. J. WINSTON PORTER RE: TWELFTH REMEDY DELEGATION REPORT - PART ONE, 5/26/87.
- 4) LETTER TO MS. LINDA BOORNAZIAN FROM MR. HARRY P. BUTLER RE: TRIP REPORT, 1/30/87. TRIP REPORT IS ATTACHED TO THE LETTER.
- 5) LETTER TO MS. LINDA BOORNAZIAN FROM MR. HARRY P. BUTLER RE: HEALTH SAFETY PLAN, 12/5/86. HEALTH AND SAFETY PLAN IS ATTACHED TO THE LETTER.
- 6) LETTER TO MS. PATRICIA TAN FROM MR. MARK E. GORMAN RE: COMMENTS ON THE OCTOBER 1985 EPA REPORT SUMMARY OF INVESTIGATIONS AND RECOMMENDATIONS FOR FURTHER ACTION, 9/5/86.
- 7) LETTER TO KATHY FROM PAT RE: HYDROGEN SULFIDE GAS RELEASE IN MILLCREEK TOWNSHIP, 6/13/86.
- 8) NOTE TO MR. ED SHOENER FROM MR. JIM ROGERS RE: VERIFICATION THAT MR. ROGERS WAS INFORMED THAT MR. SHOENER IS PROJECT OFFICER, 4/17/86.
- 9) LETTER REPORT TO MR. TRUMAN O. ANDREWS FROM MR. JOHN C. WRIGHT, JR. RE: TECHNICAL REVIEW OF THE OCTOBER 1985 EPA REPORT, SUMMARY OF INVESTIGATIONS AND RECOMMENDATIONS FOR FURTHER ACTION, 12/20/85.
- 10) LETTER TO MR. TRUMAN ANDREWS FROM MR. ED SHOENER RE: REVIEW OF REPORT ENTITLED SUMMARY OF INVESTIGATIONS AND RECOMMENDATIONS FOR FURTHER ACTION, 10/24/85. REPORT IS ATTACHED TO THE LETTER.
- 11) MEMORANDUM TO MR. ROLAND SCHRECONGOST FROM MR. JACK STANTON RE: CORRESPONDENCE CONCERNING PRESQUE ISLE NPL SITE, 6/28/85.
- 12) LETTER TO MS. HEATHER GRAY AND MR. ED SHOENER FROM MR. LAWRENCE E. STARFIELD RE: SUBMISSION OF A FINAL TECHNICAL REPORT REGARDING THE PRESQUE ISLE SITE, 3/8/85.
- 13) LETTER TO MR. TRUMAN O. ANDREWS FROM MR. JOHN C. WRIGHT, JR. RE: RESULTS OF MONITORING DRILLING ACTIVITIES AT THE EAST HIGH SCHOOL GAS WELL 3/7/85.
- 14) LETTER TO MS. HEATHER GRAY AND MR. EDWARD SHOENER RE: THE

SUBMISSION OF A FINAL PRESQUE ISLE SITE REPORT, 3/85. FINAL REPORT IS ATTACHED TO THE LETTER.

- 15) LETTER TO MR. EDWARD SHOENER FROM MR. LAWRENCE E. STARFIELD RE: CONTENTS OF A PULPING LIQUOR SAMPLE AT PRESQUE ISLE, 1/9/85.
- 16) MEMORANDUM TO MR. EDWARD SHOENER FROM MR. DAVID B. RICHARDS RE: LABORATORY ANALYSIS OF AN EAST HIGH SCHOOL GAS WELL SAMPLE, 1/4/85.
- 17) REPORT: STATUS OF INVESTIGATIONS AND RECOMMENDATIONS FOR FURTHER ACTION, BY EDWARD SHOENER, 12/84.
- 18) MEMORANDUM TO MR. ROB CLEMANS FROM MR. EDWARD SHOENER RE: USGS INVESTIGATIONS, 11/16/84. LETTER CONTAINING A COST ANALYSIS IS ATTACHED TO THE MEMORANDUM.
- 19) LETTER TO MR. LAWRENCE STARFIELD FROM MR. EDWARD SHOENER RE: ENCLOSED REPORT AND COMPUTER PRINTOUTS, 10/26/84.
- 20) BRIEFING DOCUMENT, 10/17/84.
- 21) LETTER TO MR. EDWARD SHOENER FROM MR. DAVID E. CLICK RE: A MEMORANDUM TO THE RECORD, 9/28/84. MEMORANDUM IS ATTACHED TO THE LETTER.
- 22) LETTER TO MS. HEATHER GRAY FROM MR. JAMES A. ROGERS RE: CONTENTS OF ORIGINAL INJECTED PULPING LIQUOR, 9/12/84.
- 23) REPORT: EVALUATION OF NEUTRACE/I PULPING LIQUOR, 8/31/84.
- 24) MEMORANDUM TO MR. EDWARD SHOENER FROM MR. BRUCE MOLHOLT RE: TOXICOLOGY OF POLLUTANTS IN SEEPAGE AT PRESQUE ISLE, 7/11/84.
- 25) LETTER TO MR. EDWARD SHOENER FROM MR. ARTHUR W. HOUNSLOW RE: INVESTIGATION ON THE POSSIBILITY OF ANY REACTIONS BETWEEN THE INJECTION LIQUOR AND THE FORMATION WATER, 6/30/84.
- 26) MEMORANDUM TO MR. EDWARD SHOENER FROM MR. BRUCE MOLHOLT RE: TOXICOLOGY ASSESSMENT, 6/29/84.
- 27) LETTER TO MR. ED SHOENER FROM MS. GILLIAN COOPER-DRIVER AND JOHN WILSON RE: TECHNICAL ASSAY FOR LIGNINS AND ASSOCIATED PHENOLICS, 6/14/84.
- 28) REPORT: TECHNICAL ASSAY FOR LIGNINS AND ASSOCIATED PHENOLICS, 6/84.
- 29) LETTER TO MR. EDWARD SHOENER FROM MR. LEONARD F. KOEDERITZ RE: SIMULATIONS OF THE PRESQUE ISLE WELL EMPLOYING A THICKNESS OF 75 FEET AT HAMMERMILL AND PRESQUE ISLE, 5/11/84. SIMULATIONS ARE ATTACHED TO THE LETTER.
- 30) LETTER TO MR. ED SHOENER FROM MR. J. RUSSELL MCGREGOR, JR. RE: THE GROUND WATER IN THE ERIE, PENNSYLVANIA AREA, 5/7/84. LETTERS AND ATTACHMENTS FROM WESTON CONSULTANTS TO DER DATED 7/1/80 ARE ATTACHED TO THE LETTER.
- 31) MEMORANDUM TO REGIONAL ADMINISTRATORS, REGIONS I-X FROM MR. LEE M. THOMAS RE: INTERIM PROCEDURES FOR SELECTING SITES FROM THE NATIONAL PRIORITIES LIST, 4/27/84.
- 32) LETTER TO MR. ED SHOENER FROM MR. GARRY G. EHRLICH, PH.D. RE: INJECTION OF WASTE SULFITE PULPING LIQUORS, 3/16/84.
- 33) LETTER TO MR. ED SHOENER FROM MS. GILLIAN COOPER-DRIVER RE: TRANSMITTAL OF INVESTIGATIVE REPORT, 2/23/84. REPORT IS ATTACHED TO THE LETTER.

- 34) LETTER TO MR. ED SHOENER FROM MR. ARTHUR W. HOUNSLOW RE: METHOD OF ANALYSIS, 2/11/84.
- 35) MEMORANDUM TO THE RECORD FROM MR. JACK FELBINGER RE: SYNOPSIS OF USGS PARTICIPATION IN WELL SAMPLING, 1/19/84. TABLES ARE ATTACHED TO THE MEMORANDUM.
- 36) LETTER TO MR. THOMAS EICHLER FROM MR. RICHARD BROWN RE: SITE MEETING, 1/16/84.
- 37) LETTER TO MR. ED SHOENER FROM MR. GARTH GLENN RE: TRANSMITTAL OF REPORT, 1/11/84. RELATED MEMORANDUM AND REPORT ARE ATTACHED TO THE LETTER.
- 38) LETTER TO MS. HEATHER GRAY FROM MR. JOHN WRIGHT RE: REPORT TRANSMITTED, 1/11/84.
- 39) MEMORANDUM TO MR. STEPHEN WASSERSUG FROM MR. EDWARD SHOENER RE: EXPERT REVIEW OF THE PRESQUE ISLE PROJECT, 1/11/84.
- 40) LETTER TO MR. LAWRENCE STARFIELD FROM MR. ED SHOENER RE: TRANSMITTAL OF TECHNICAL DOCUMENTS, 12/29/83. ANALYTICAL REPORT IS ATTACHED TO THE LETTER.
- 41) MEMORANDUM TO THE FILE FROM MR. ED SHOENER RE: TECHNICAL ASSAY OF PLANT CHEMISTRY AND PHENOLS, 12/19/83.
- 42) LETTER TO MR. STANLEY LASKOWSKI FROM MR. T.O. ANDREWS RE: MEETING BETWEEN U.S. EPA AND HAMMERMILL, 12/12/83.
- 43) LETTER TO MR. THOMAS EICHLER FROM MR. RICHARD BROWN RE: NPL LISTING, 12/6/83.
- 44) LETTER TO MR. DONALD SENOVICH FROM MR. EDWARD SHOENER RE: ANGERMAN ASSOCIATES PROPOSAL, 11/4/83.
- 45) LETTER TO MS. HEATHER GRAY FROM MR. JAMES ROGERS RE: PROPOSED MONITORING WELL, 10/20/83.
- 46) LETTER TO MR. DON SENOVICH FROM MR. THOMAS ANGERMAN RE: SUBCONTRACT AGREEMENT, 10/16/83. QUALIFICATIONS, CONSULTING AGREEMENT, EXHIBIT A AND EXHIBIT B ARE ATTACHED TO THE LETTER.
- 47) LETTER TO MR. ED SHOENER FROM MS. GILLIAN COOPER-DRIVER RE: TRANSMITTAL OF REPORT, 10/19/83. TECHNICAL ASSAY OF PLANT CHEMISTRY AND PHENOLS IS ATTACHED TO THE LETTER.
- 48) LETTER TO MR. SHELDON NOVICK FROM MR. CARROLL WILLS RE: RESULTS OF ANALYTICAL SUPPORT FOR THE WAYNE SCHOOL INVESTIGATION, 10/18/83. RESULTS ARE ATTACHED TO THE LETTER.
- 49) LETTER TO MR. EDWARD SHOENER FROM MR. DAVID RICHARDS RE: TECHNICAL DATA, 10/12/83.
- 50) LETTER TO MR. LAWRENCE STARFIELD FROM MS. HEATHER GRAY RE: DR. BROWN'S ANALYSIS OF SPENT NSSC PULPING LIQUOR, 10/12/83.
- 51) LETTER TO MR. EDWARD SHOENER FROM MR. DAVID RICHARD RE: CORE PERMEABILITY VERSUS IN SITU DRILL STEM TESTING PERMEABILITY, 10/12/83. FERRON SANDSTONE FACT SHEET, RGE GRAPH, AND GROUND WATER SYSTEM REPORT ARE ATTACHED TO THE LETTER.
- 52) LETTER TO MS. HEATHER GRAY FROM MR. LAWRENCE STARFIELD RE: TRANSMITTAL OF DR. BROWN'S MEMORANDUM, 10/4/83.
- 53) FACT SHEET RE: DEEP SUBSURFACE CONDITIONS AT PRESQUE ISLE NO. 7 WELL, 9/22/83.

- 54) MEMORANDUM TO MR. HOWARD WEIN FROM MR. JOHN WALKER RE: WAYNE STREET WELL, 9/16/83.
- 55) LETTER TO MR. EDWARD SHOENER FROM MR. DAVID RICHARDS RE: WAYNE SCHOOL DISTRICT WELL, 9/16/83. TABLES, TABULATION, CHAIN OF CUSTODY RECORD, MAPS, LETTER OF TRANSMITTAL, WESTON LETTER, FLUID ANALYSIS SUMMARY, AND ORGANIC ANALYSES ARE ATTACHED TO THE LETTER.
- 56) LETTER TO MR. DAVID CLICK FROM MR. EDWARD SHOENER RE: DRILLING OF GAS WELL, 9/14/83.
- 57) LETTER TO MR. ED SHOENER FROM MR. GARTH GLENN RE: NUS SUBCONTRACTING, 9/7/83. LETTER REPORT ENTITLED TECHNICAL REVIEW OF THE AUGUST 15, 1983 PENN DER REPORT IS ATTACHED TO THE LETTER.
- 58) LETTER TO MR. DAVID NOBLE FROM MR. BRUCE LASWELL RE: COST ESTIMATES FOR LONG-TERM REMEDIAL MEASURES, 9/2/83.
- 59) RECORD OF PHONE CONVERSATION TO TOM HECKRAN FROM MS. HEATHER GRAY RE: DRILLING PROGRAM, 8/31/82.
- 60) RECORD OF PHONE CONVERSATION TO MR. JIM ROGERS FROM MS. HEATHER GRAY RE: HAMMERMILL'S RELUCTANCE TO DRILL WELLS, 8/29/83.
- 61) RECORD OF PHONE CONVERSATION TO MR. CHUCK ROBIE FROM MS. HEATHER GRAY RE: DRILLING, 8/25/83.
- 62) RECORD OF COMMUNICATION TO MR. ED SHOENER FROM MR. JIM ROGERS RE: DRILLING AT WAYNE STREET AND VINCENT HIGH SCHOOL, 8/24/83.
- 63) LETTER TO MR. EDWARD SHOENER AND MR. JOHN WALKER FROM MR. JOHN WRIGHT RE: TRANSMITTAL OF TESTING AND SAMPLING PLAN, 8/22/83. TESTING AND SAMPLING PLAN IS ATTACHED TO THE LETTER.
- 64) LETTER TO MS. HEATHER GRAY AND MR. HOWARD WEIN FROM MR. LAWRENCE STARFIELD RE: SAMPLING AT ERIE SCHOOL DISTRICT WELLS, 8/19/83.
- 65) LETTER TO MS. HEATHER GRAY AND MR. HOWARD WEIN FROM MR. LAWRENCE STARFIELD RE: GAS WELL IN THE SCHOOL DISTRICT, 8/15/83.
- 66) REPORT: BEACH 7 WELL PROBLEM: PRESQUE ISLE STATE PARK AND ITS CONNECTION WITH HAMMERMILL'S WASTE INJECTION WELLS, BY MR. JOHN T. WALKER, 8/15/83.
- 67) LETTER TO HEATHER GRAY AND HOWARD WEIN FROM LAWRENCE E. STARFIELD RE: DRILLING SPECIFICATIONS AND MATTERS RELATING TO A SAMPLING OPERATION, 8/15/83.
- 68) MEMORANDUM TO KATHRYN HODGKISS FROM ED SHOENER RE: SOLE SOURCE CONTRACT FOR WELL DRILLING ON HAMMERMILL PAPER COMPANY, 8/11/83.
- 69) BUSAN ANALYSIS PROPOSAL, 8/4/83.
- 70) LETTER TO MR. EDWARD SHOENER AND MR. HOWARD J. WEIN FROM MR. JAMES A. ROGERS AND MR. LAWRENCE E. STARFIELD RE: A REQUEST FOR HAMMERMILL TO SUMMARIZE ITS POSITION REGARDING THE DRILLING OF A MONITORING WELL ON ITS PROPERTY, 8/3/83.
- 71) LETTER TO MR. ED SHOENER FROM MR. GARY W. WOJCIK RE: AN EXTENSION OF THE SUBMISSION DATE FOR THE PRESQUE ISLE SITE DRAFT REMEDIAL ACTION MASTER PLAN, 8/2/83.
- 72) LETTER TO MR. ED. SHOENER FORM MR. HOWARD J. WEIN RE: TRANSMITTAL OF COPIES OF PERMITS FOR WELLS, 8/1/83. COPIES ARE ATTACHED TO THE LETTER.
- 73) RECORD OF COMMUNICATION TO MR. ED. SHOENER FROM WEIN, ROGER

AND STARFIELD RE: PRESQUE ISLE/HAMMERMILL, 7/5/83.

- 74) LETTER TO MS. WENDY GORDON FROM MR. EDWARD SHOENER RE:
TRANSMITTAL OF REQUESTED MATERIALS, 6/30/83.
- 75) LETTER TO MR. EDWARD SHOENER FROM MR. LEONARD KOEDERITZ RE:
PRESSURE FLOW AT PRESQUE ISLE WELL, 6/30/83.
- 76) LETTER TO MR. RUSSELL H. WYER FROM MR. JAMES A. ROGERS RE:
PROPOSED NATIONAL PRIORITIES LIST, 6/27/83.
- 77) LETTER TO MR. TRUMAN O. ANDREWS FROM MR. JOHN C. WRIGHT, JR.
RE: TRANSMITTAL OF TECHNICAL EVALUATIONS, 6/24/83.
- 78) LETTER TO MR. EDWARD SHOENER FROM MR. JAMES A. ROGERS RE: A
LISTING OF DOCUMENTS SUPPLIED TO MS. MARSH OF ABC, 6/23/83
- 79) LETTER TO MR. RUSSELL H. WYER FROM MR. JAMES A. ROGERS RE:
PROPOSED NATIONAL PRIORITIES LIST, 6/21/83.
- 80) LETTER TO MR. TRUMAN O. ANDREWS FROM MR. JOHN C. WRIGHT, JR. RE:
A TECHNICAL REVIEW OF EPA DOCUMENTS ON PRESQUE ISLE WELL PROJECT,
6/20/83. LISTED ATTACHMENTS ARE ATTACHED TO THE LETTER.
- 81) MEMORANDUM TO LINDA YOUNG BOORNAZIAN FROM MR. EDWARD SHOENER RE:
SUBCONTRACT FOR WELL DRILLING FOR THE PRESQUE ISLE SITE, 6/13/83.
RECOMMENDED SPECIFICATIONS ARE ATTACHED TO THE MEMORANDUM.
- 82) LETTER TO MR. RUSSELL H. WYER FROM MR. JAMES A. ROGERS RE:
PROPOSED NATIONAL PRIORITIES LIST, 6/10/83.
- 83) LETTER TO MR. TRUMAN O. ANDREWS FROM MR. JOHN C. WRIGHT, JR. RE:
TECHNICAL REVIEW OF EPA DOCUMENTS RELEASED MAY 19, 1983, 6/8/83.
- 84) LETTER TO DR. EDWARD SHOENER FROM MR. KARL J. NIKLAS RE: THE
MONSANTO RESEARCH CORP.'S ANALYSIS OF THE BEACH #7, PRESQUE
ISLE FLUID, 6/8/83.
- 85) LETTER TO DR. EDWARD SHOENER FROM MR. KARL NIKLAS RE:
QUALIFICATIONS OF DR. GILLIAN COOPER-DAVIS, 6/8/83.
- 86) LETTER TO MR. EDWARD SHOENER FROM MR. LEONARD KOEDERITZ RE:
PERMEABILITY VARIATIONS STUDIED AT PRESQUE ISLE WELL, 6/3/83.
- 87) QUALITY ASSURANCE WORK PLAN FOR PRESQUE ISLE, PENNSYLVANIA
REMEDIAL ACTION MASTER PLAN, 5/31/83.
- 88) MEMORANDUM TO MR. EDWARD SHOENER FROM MR. CHARLES KLEEMAN RE:
REVIEW OF HAMMERMILL INJECTION PROGRAM UNDER PROPOSED EPA UIC
REGULATIONS, 5/26/83.
- 89) LETTER TO MR. TRUMAN O. ANDREWS FROM MR. JOHN C. WRIGHT, JR. RE:
TECHNICAL REVIEW OF EPA DOCUMENTS RELEASED APRIL 23, 1983, 5/25/83.
- 90) LETTER TO MR. ED SHOENER FROM MR. KEVIN G. CARROLL RE: AKRON
(BASS ISLAND) BRINE, 5/25/83.
- 91) LETTER TO MR. WASSERSUG FROM HAMMERMILL PAPER COMPANY RE: A
REQUEST THAT HAMMERMILL PAPER COMPANY DRILL A WELL IN ORDER TO
PROVIDE EPA WITH A SAMPLE OF INJECTION WASTE, 5/4/83.
- 92) LETTER TO MR. TODD E. GULICK FROM MR. JAMES A. ROGERS RE:
HAMMERMILL PAPER COMPANY V. RUCKELSHAUS CIVIL ACTION,
NO. 830575, 5/24/83.
- 93) LETTER TO MR. ED SHOENER FROM MR. LEONARD KOEDERITZ RE: THE
PRESSURE ANALYSIS FOR THE PRESQUE ISLE STUDY, 5/23/83. DATA ARE

ATTACHED TO THE LETTER.

- 94) MEMORANDUM TO MR. ED SHOENER FROM MR. DANIEL K. DONNELLY RE: PRESQUE ISLE SAMPLES, 5/19/83.
- 95) LETTER TO MR. KEVIN G. CARROLL FROM MR. ED SHOENER RE: BASS ISLAND (AKRON) BRINE, 5/18/83. WELL REPORTS ARE ATTACHED TO THE LETTER.
- 96) RECORD OF PHONE CONVERSATION TO MS. HEATHER GRAY FROM MR. JIM ROGERS RE: HAMMERMILL-PRESQUE ISLE, 5/16/83.
- 97) MEMORANDUM TO MR. ED SHOENER FROM MR. JOHN T. WALKER RE: ACETATE-FORMATE RATIO IN BASS ISLAND 5/9/83. ARTICLE ON "THE CHEMISTRY OF CELLULOSE AND WOOD" IS ATTACHED TO THE MEMORANDUM.
- 98) LETTER TO DR. RICHARD BROWN FROM MR. STEPHEN WASSERSUG RE: A REQUEST FOR HAMMERMILL TO DRILL A MONITORING WELL, 5/8/83. RECOMMENDED SPECIFICATIONS ARE ATTACHED TO THE LETTER.
- 99) HANDWRITTEN NOTES OF PRESQUE ISLE, 5/5/83.
- 100) BIOGRAPHICAL DATA ON LEONARD F. KOEDERITZ (UNDATED).

COMMUNITY INVOLVEMENT

- 1) REPORT: COMMUNITY RELATIONS PLAN PRESQUE ISLE SITE, 12/86.
- 2) REPORT: THE PRESQUE ISLE SUPERFUND SITE, BY MR. T.O. ANDREWS, 10/26/85.
- 3) LETTER OF TRANSMITTAL TO MR. JEFF DUNCKEL FROM MR. KENNETH MILLER, 8/10/83.
- 4) LETTER TO MR. DALE WILLATS FROM MR. ROBERT J. WELLINGTON RE: LEVEL OF BARIUM IN THE DRINKING WATER, 7/18/83. CHEMICAL SAMPLES ARE ATTACHED TO THE LETTER.
- 5) LETTER TO MS. FABIENNE MARSH FROM MR. ED SHOENER RE: DIFFERENT OPINIONS ABOUT THE PRESQUE ISLE SITE, 7/31/83. PRESS RELEASE AND LETTER ABOUT PROPOSED LISTING OF PRESQUE ISLE TO THE NATIONAL PRIORITIES LIST ARE ATTACHED TO THE LETTER.
- 6) LETTER TO MR. ROY RAGER FROM MR. ED SHOENER RE: TRANSMITTAL OF SAMPLE RESULTS, 7/12/83. COPY OF LETTER SENT TO MR. JOHN JOHNSON AND MR. ROBERT HERMANN.
- 7) LETTER TO MR. R.P. OVERDOFF FROM ED SHOENER RE: SAMPLES COLLECTED FROM WELLS, 7/12/83. COPY OF THE LETTER SENT TO MR. ALBERT DEAN, MR. KENNETH EVANS, MR. ARTHUR BEATTY, MR. ELMER BROWN, MR. DALE WILLATS, MS. DOROTHY GEHRLEIN, AND MR. JAMES O'HARA.
- 8) FACT SHEET REGARDING STATUS AT PRESQUE ISLE SITE, JULY 1983.
- 9) LETTER TO MR. JAMES A. ROGERS FROM MR. ED SHOENER RE: RESPONSE TO A FREEDOM OF INFORMATION ACT REQUEST, 6/28/83.
- 10) REPORT: SUMMARY OF COMMENTS AND RESPONSES ON THE SCORING OF THE HAZARDOUS RANKING SYSTEM, APRIL 1983.

DATA SUMMARY

- 1) MEMORANDUM TO MR. RUSSELL SLOBODA FROM MS. LINDA R. KROKENBERGER RE: SAMPLE NUMBERS 847C-7 THROUGH 847C-13, AND 847C-1 THROUGH 847C-5, 11/22/83.

- 2) MEMORANDUM TO MR. ED SHOENER FROM MR. JOHN T. WALKER RE: LAB ANALYSES OF BEACH WELL SEVEN AND THE BASS ISLAND FORMATION, 4/7/83. LAB ID NUMBERS 2320909, 2320910, 2348006, 2348003, 4-11110, 4-111101, 8232825, 4-101881, 4-101880, 4-102882, 4-102382, 4-102383, 4-102388, 4-102384, 4-102784, 4-102987, 4-110490, 8233058, 4-110589, 4-110927, 8232626, 4-110928, 8232627, 4-111102, 8232826, 4-111103 ARE ATTACHED TO THE LETTER.
- 3) MEMORANDUM TO MR. SHELDON NOVICK FROM MS. CARROLL WILLS RE: RESULTS OF ANALYTICAL SUPPORT FOR THE PRESQUE ISLE INVESTIGATION, 2/22/83. GROUNDWATER ANALYSIS BRIEFING, SAMPLE NUMBERS 3-13558, 3-13754, 3-13778, 3-13806, 3-13849, 3-13871, 3-13883, 3-13759, 3-13788, 3-13822, 3-19119, 3-19120, 3-13759, 3-19115 THROUGH 3-19118 B, 3-19119 THROUGH 3-19122 C, TABLES 1-5, AND FIGURES A-L ARE ATTACHED TO THE LETTER.
- 4) LETTER TO MR. DONALD J. ZIMMER FROM MR. RUSSELL L. CRAWFORD RE: SAMPLE ANALYSIS, 1/28/83. SAMPLE NUMBERS 2611014, 2611015, 2611013, AND 2611016 ARE ATTACHED TO THE LETTER.
- 5) MEMORANDUM TO MR. ED SHOENER FROM MR. DANIEL K. DONNELLY RE: ENCLOSED DATA REPORTS, 1/20/83. INFORMATION ON SAMPLE NUMBERS 821112-77-80, 821214-03, 04 ARE ATTACHED TO THE MEMORANDUM.
- 6) MEMORANDUM TO MR. DANIEL K. DONNELLY FROM MR. RICK DREISCH, RE: PRESQUE ISLE SAMPLES, 1/18/83. INFORMATION ON SAMPLE NUMBERS 821112-77-80, 821214-03, 04 ARE ATTACHED TO THE MEMORANDUM.
- 7) MEMORANDUM TO MR. D.E. ERDMAN FROM MR. EARL ANTHONY RE: WATER QUALITY SAMPLE FOR TANNIN AND LIGNIN, 1/18/83.
- 8) LETTER TO MR. ED SHOENER FROM MR. GARTH GLENN RE: ATTACHMENTS OF ROUGH CALCULATIONS OF H2S CONCENTRATIONS, 1/11/83.
- 9) DESK MEMORANDUM TO MR. ED SHOENER FROM MR. J. WALKER RE: ATTACHED SAMPLES NUMBERS 161-256, 124-123, 312-159, 1/7/83.
- 10) MEMORANDUM TO MR. DANIEL K. DONNELLY FROM MR. JOHN AUSTIN, RE: GC/MS ANALYSIS OF SUPERFUND SAMPLES 821101-01, 821112-77-78, 821214-03-04, 821108-38-39 FROM PRESQUE ISLE, 1/6/83. INFORMATION ON THE ABOVE SAMPLE NUMBERS IS ATTACHED TO THE MEMORANDUM.
- 11) MEMORANDUM TO MR. ED SHOENER FROM MR. DANIEL K. DONNELLY RE: VOLATILE AND EXTRACTABLE ORGANICS DATA REPORTS, 12/13/82. LETTERS AND SAMPLE DATA PERTAINING TO SAMPLE NUMBERS 821026-01-03, 821108-38, 39 ARE ATTACHED TO THE MEMORANDUM.
- 12) RECORD OF COMMUNICATION TO MR. ED SHOENER FROM MR. HARRY MADRIL RE: STATUS OF THE M.S. WELL, 12/12/82.
- 13) LETTER TO MR. DANIEL K. DONNELLY FROM MR. JOHN AUSTIN RE: SUPERFUND PRESQUE ISLE GAS WELL NUMBER SEVEN, 821019-01-02, 821010-01, 11/26/82. SAMPLE DATA PERTAINING TO ABOVE SAMPLE ARE ATTACHED TO THE LETTER.
- 14) LETTER TO MR. DANIEL K. DONNELLY FROM MR. JOHN AUSTIN RE: GC/MS ANALYSIS OF SUPERFUND SAMPLES 821026-01-03, 11/24/82. INFORMATION REGARDING ABOVE SAMPLES, QUALITY CONTROL SHEET, LETTERS, AND SAMPLE DATA FOR SAMPLE NUMBERS 821101-01, 821019-01-02 ARE ATTACHED TO THE LETTER.
- 15) LABORATORY ANALYTICAL DATA FOR LAB ID 2348006, 11/12/82.
- 16) LABORATORY ANALYTICAL DATA FOR LAB ID 2320909, 10/11/82.
- 17) LETTER TO LINDA BOORNAZIAN FROM DANIEL K. DONNELLY RE: PRESQUE ISLE ANALYTICAL RESULTS, 1/12/82. LETTERS TO MR. DANIEL K. DONNELLY FROM

MR. JOHN AUSTIN REGARDING SAMPLE NUMBER 81120216, 18, 21 ARE ATTACHED TO THE LETTER.

- 18) RECORD OF COMMUNICATION TO MR. ED SHOENER FROM MR. GARTH GLENN RE: H2S CONCENTRATION, 1/3/82. INFORMATION FROM SAMPLE NUMBERS 312-159, 319-03666, 161-256, 193-02932, 124-123, 126-02548 IS ATTACHED TO THE RECORD OF COMMUNICATION.
- 19) MEMORANDUM FROM MR. RICK DREISCH TO MR. DANIEL K. DONNELLY RE: PRESQUE ISLE PURGEABLE ORGANICS ANALYSIS BY FSCC/GC/MS, 12/15/81. RESULTS FROM SAMPLE NUMBERS 811202-17, -19, -20, -22 ARE ATTACHED TO THE MEMORANDA.
- 20) WELL RECORD FROM COMMONWEALTH OF PENNSYLVANIA, 10/80.
- 21) NOTES FROM MR. ED SHOENER REGARDING POLLUTION AT PRESQUE ISLE SITE, 1977.
- 22) FORMATION DATA, 8/28/64.
- 23) WELL RECORD FROM COMMONWEALTH OF PENNSYLVANIA, 3/28/63.
- 24) MEMORANDUM TO HAMMERMILL PAPER COMPANY FROM MR. T.J. POWERS RE: BASS ISLAND BRINE SAMPLES, 3/12/63.
- 25) LAB DATA REPORT TO DOWELL, INCORPORATED, 3/6/63.
- 26) TULSA LABORATORY REPORT, 2/28/63.
- 27) LAB DATA REPORT TO DOWELL, INCORPORATED, 2/18/63.
- 28) SPINNER SUPPLEMENTARY REPORT BY DOWELL INDUSTRIAL SERVICE, 2/18/63.
- 29) LETTER TO MR. GRAY FROM MR. ROBERT THOMPSON RE: GAS DRILLING, 12/28/56.
- 30) WELL DATA SHEET FOR CITY OF ERIE #1 PRESQUE ISLE GAS WELL, 9/9/10.
- 31) HAMMERMILL PAPER COMPANY'S WASTE DISPOSAL WELLS (UNDATED).
- 32) CASE SUMMARY QUALITY CONTROL REPORTS RELEASED BY LINDA R. KROKENBERGER (UNDATED).
- 33) PLUGGING OF GAS WELL ON BEACH NO. 7 (UNDATED).

SITE SPECIFIC GUIDANCE DOCUMENTS

- 1) "THE LOWER DEPTHS," BY MICHAEL BROWN, THE AMICUS JOURNAL, WINTER 1986.
- 2) "LAWS OF PENNSYLVANIA BUREAU OF OIL AND GAS MANAGEMENT," 1984.
- 3) "GEOCHEMISTRY AND SUBSURFACE CHARACTERIZATION RELATED TO THE TRANSPORT AND FATE OF INORGANIC CONTAMINANTS," BY ARTHUR W. HOUNSLOW, ENVIRONMENT AND SOLID WASTES, 7/83.
- 4) "PLUME INVESTIGATION LAKE ERIE PENNSYLVANIA," BY SUSAN E. TITUS, 5/82.
- 5) "CHEMICAL DIVERSIFICATION AND EVOLUTION OF PLANTS AS INFERRED FROM PALEOBIOCHEMICAL STUDIES," BY CARL J. NIKLAS, 1982.
- 6) "GROUND-WATER GEOCHEMISTRY: ARSENIC IN LANDFILLS," BY ARTHUR W. HOUNSLOW, GROUND WATER, JULY-AUGUST 1980.
- 7) "EVIDENCE FOR LIGNIN-LIKE CONSTITUENTS IN EARLY SILURIAN (LLANDOVERIAN) PLANT FOSSILS," BY KARL J. NIKLAS, ET AL, SCIENCE, 7/18/1980.

- 8) "H2S PRODUCES KICK COMPLICATIONS," BY NEAL ADAMS, 3/80.
- 9) "THE STATE WATER PLAN: SUBBASIN 15," PREPARED BY OFFICE OF RESOURCES MANAGEMENT, 12/79.
- 10) "FRACTURE-CONTROLLED PRODUCTION," COMPOSITION BY JOHN R. KOSTURA, ET AL, 1977.
- 11) "LITHIUM IN CLAYEY ROCKS OF PENNSYLVANIA AGE, WESTERN PENNSYLVANIA," BY HARRY A. TOURTELLOT, LITHIUM RESOURCES AND REQUIREMENTS BY THE YEAR 2000, 12/76.
- 12) "SEMI-CHEMICAL SPENT LIQUOR TREATMENT METHODS," 4/16/68.
- 13) "PRECAMBRIAN OF NORTHWESTERN PENNSYLVANIA," 1968.
- 14) "SUBSURFACE DISPOSAL OF LIQUID WASTES IN ONTARIO," BY D.D. MCLEAN, 1968.
- 15) "DEEP-WELL DISPOSAL OF THE SPENT HARDWOOD PULPING LIQUORS," BY R.W. BROWN, ET AL, 12/66.
- 16) "SUBSURFACE DISPOSAL OF ACID MINE WATER BY INJECTION WELLS", BY ROBERT STEFANKO, ET AL, 8/10/65.
- 17) "DEEP WELL DISPOSAL OF SPENT PULPING LIQUORS," BY C.W. SPALDING, ET AL, 5/65.
- 18) "SPENT SULFITE LIQUOR: THE PEARL-BENSON, OR NITROSO, METHOD FOR THE ESTIMATION OF SPENT SULFITE LIQUOR CONCENTRATIONS IN WATERS," BY VINCENT F. FELLICETTA, ET AL, 6/63.
- 19) "PULPING AND PAPER CHEMISTRY AND CHEMICAL TECHNOLOGY," 1960.
- 20) "THE GEOLOGY OF THE OIL REGIONS OF WARREN, VENANGO, CLARION AND BUTLER COUNTIES," BY JOHN F. CAILL, 1880.
- 21) "USES OF AMMONIA AND COMPOUNDS IN PAPERMAKING," (UNDATED).
- 22) "EVALUATION OF GEOCHEMICAL ANALYSIS OF WELL WATER/SEEPAGE FROM THE PRESQUE ISLE SUPERFUND SITE," BY KARL J. NIKLAS (UNDATED).
- 23) "OVERBURDEN MINEROLOGY AS RELATED TO GROUND WATER CHEMICAL CHANGES IN COAL STRIP MINING," BY A.W. HOUNSLOW ET AL, (UNDATED).
- 24) "HANDBOOK OF NATURAL GAS ENGINEERING," (UNDATED).

GENERAL GUIDANCE DOCUMENTS *

- 1) "PROMULGATION OF SITES FROM UPDATES 1-4," FEDERAL REGISTER, DATED 6/10/86.
- 2) "PROPOSAL OF UPDATE 4," FEDERAL REGISTER, DATED 9/18/85.
- 3) MEMORANDUM TO U. S. EPA FROM MR. GENE LUCERO REGARDING COMMUNITY RELATIONS AT SUPERFUND ENFORCEMENT SITES, UPDATED 8/28/85.
- 4) GROUNDWATER CONTAMINATION AND PROTECTION, UPDATED BY MR. DONALD V. FELICIANO ON 8/28/85.
- 5) GUIDANCE ON REMEDIAL INVESTIGATIONS UNDER CERCLA, DATED 6/85.
- 6) GUIDANCE ON FEASIBILITY STUDIES UNDER CERCLA, DATED 6/85.
- 7) "PROPOSAL OF UPDATE 3," FEDERAL REGISTER, DATED 4/10/85.
- 8) MEMORANDUM TO U. S. EPA FROM MR. JACK MCGRAW ENTITLED "COMMUNITY RELATIONS ACTIVITIES AT SUPERFUND SITES - INTERIM GUIDANCE," DATED

3/22/85.

- 9) "PROPOSAL OF UPDATE 2," FEDERAL REGISTER, DATED 10/15/84.
- 10) EPA GROUNDWATER PROTECTION STRATEGY, DATED 9/84.
- 11) MEMORANDUM TO U. S. EPA FROM MR. WILLIAM N. HECKMAN, JR. ENTITLED
"TRANSMITTAL AT SUPERFUND REMOVAL PROCEDURES - REVISION 2,"
DATED 8/20/84.
- 12) "PROPOSAL OF UPDATE 1," FEDERAL REGISTER, DATED 9/8/83.
- 13) COMMUNITY RELATIONS IN SUPERFUND: A HANDBOOK (INTERIM VERSION),
DATED 9/83.
- 14) "PROPOSAL OF FIRST NATIONAL PRIORITY LIST," FEDERAL REGISTER, DATED
12/30/82.
- 15) "INTERIM PRIORITIES LIST," FEDERAL REGISTER, DATED 10/23/82.
- 16) "EXPANDED ELIGIBILITY LIST," FEDERAL REGISTER, DATED 7/23/82.
- 17) UNCONTROLLED HAZARDOUS WASTE SITE RANKING SYSTEM: A USER'S MANUAL
(UNDATED).
- 18) FIELD STANDARD OPERATING PROCEDURES - AIR SURVEILLANCE (UNDATED).
- 19) FIELD STANDARD OPERATING PROCEDURES - SITE SAFETY PLAN (UNDATED).

*LOCATED IN U. S. EPA REGION III OFFICE.

U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION III

PRESQUE ISLE SUPERFUND SITE
RESPONSIVENESS SUMMARY

PUBLIC COMMENT PERIOD ON THE REMEDIAL
INVESTIGATION/FEASIBILITY STUDY REPORT

AUGUST 12, 1987 TO SEPTEMBER 18, 1987

INTRODUCTION

IN ACCORDANCE WITH THE U.S. ENVIRONMENTAL PROTECTION AGENCY'S COMMUNITY RELATIONS POLICY AND GUIDANCE, THE EPA REGION III OFFICE HELD A PUBLIC COMMENT PERIOD TO OBTAIN COMMENTS ON THE RECOMMENDATIONS OF THE REMEDIAL INVESTIGATION/FEASIBILITY STUDY (RI/FS) PREPARED FOR THE PRESQUE ISLE SUPERFUND SITE IN ERIE COUNTY, PENNSYLVANIA. IN CONJUNCTION WITH THE COMMENT PERIOD, A PUBLIC MEETING WAS HELD AT THE WEST LAKE JR. HIGH SCHOOL AUDITORIUM IN MILLCREEK TOWNSHIP, ERIE COUNTY, PENNSYLVANIA ON AUGUST 13, 1987. BOTH THE COMMENT PERIOD AND MEETING WERE ANNOUNCED BY PUBLIC NOTICES PUBLISHED IN LOCAL ERIE NEWSPAPERS.

THE FOLLOWING RESPONSIVENESS SUMMARY WAS PREPARED BY BOOZ, ALLEN & HAMILTON, INC., A SUBCONTRACTOR TO CAMP, DRESSER & MCKEE, INC., UNDER CONTRACT TO REGION III TO PROVIDE COMMUNITY RELATIONS SUPPORT. THE SITE HISTORY SECTION OF THIS SUMMARY IS TAKEN LARGELY FROM A SITE FACT SHEET THAT WAS DEVELOPED AS PART OF THE REGION'S COMMUNITY RELATIONS ACTIVITIES AND WAS DISTRIBUTED AT THE PUBLIC MEETING. THE SUMMARY OF PUBLIC COMMENTS WAS DEVELOPED FROM WRITTEN COMMENTS RECEIVED BY PATRICIA TAN DURING THE PUBLIC COMMENT PERIOD AND ORAL STATEMENTS MADE AT THE PUBLIC MEETING. COMMENTS AND QUESTIONS ARE ORGANIZED BY ISSUE AREA. THIS SUMMARY DOES NOT REPEAT THE COMMENTS VERBATIM. A VERBATIM TRANSCRIPT OF THE PUBLIC MEETING PROCEEDING WAS PREPARED BY A COURT REPORTER PRESENT AT THE MEETING. THE TRANSCRIPT IS INCLUDED AS APPENDIX C. WRITTEN COMMENTS RECEIVED BY EPA WILL BE PLACED IN THE PUBLIC RECORD.

1.0 BACKGROUND

A. SITE HISTORY

THE PRESQUE ISLE SITE IS LOCATED ON A PENINSULA WHICH IS KNOWN AS THE PRESQUE ISLE STATE PARK NEAR THE CITY OF ERIE, IN ERIE COUNTY, PENNSYLVANIA. THE SITE AREA INCLUDES AN ABANDONED GAS WELL KNOWN AS THE PRESQUE ISLE BEACH NO. 7 WELL AND ITS SURROUNDING, CONTAMINATED AREA. THE SURROUNDING AREA IS COMPRISED OF A PORTION OF AN UNDERGROUND GEOLOGIC FORMATION WHICH IS KNOWN AS THE BASS ISLAND FORMATION. PROPERTY ON WHICH THE PRESQUE ISLE BEACH NO. 7 WELL IS LOCATED IS OWNED BY THE COMMONWEALTH OF PENNSYLVANIA. THE MAIN USE OF THE AREAS ADJACENT TO THE SITE IS FOR RECREATION.

PRESQUE ISLE BEACH NO. 7 WELL WAS DRILLED BY THE CITY OF ERIE IN 1910 FOR USE BY THE CITY WATERWORKS. IT EXTENDED 3,570 FEET THROUGH THE BASS ISLAND FORMATION AND INTO THE MEDINA FORMATION, AN UNDERGROUND FORMATION AT A LOWER DEPTH. IN THE 1920S, THE WELL WAS ABANDONED WITHOUT PLUGGING AND COVERED BY A CONCRETE ROAD SURFACE THAT WAS LATER COVERED WITH SAND. IN 1976, AFTER NUMEROUS COMPLAINTS FROM PARK VISITORS ABOUT A FOUL-SMELLING ODOR IN THE BEACH NO. 7 PARKING LOT, THE ERIE COUNTY HEALTH DEPARTMENT FILED A COMPLAINT WITH PARK OFFICIALS. THE COUNTY HEALTH DEPARTMENT NOTED A SEEP NEAR BEACH NO. 7 WELL THAT WAS DISCHARGING A NOXIOUS, HYDROGEN SULFIDE-BEARING, BLACK LIQUID.

IN MARCH 1979, THE PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES (PADER) UNCOVERED THE WELL TO INVESTIGATE COMPLAINTS THAT THE ODORS WERE GETTING WORSE. THE WELL WAS IDENTIFIED AS THE SOURCE OF THE DISCHARGE AND WAS EQUIPPED WITH A BLEED VALVE AND PRESSURE GAUGE TO CONTROL DISCHARGE. PADER PERMANENTLY PLUGGED THE BASS ISLAND FORMATION WITHIN THE WELL ON OCTOBER 1982. INVESTIGATIONS CONDUCTED AT THAT TIME DETERMINED THAT NO HEALTH HAZARDS WERE PRESENT AS A RESULT OF THE SEEPAGE THAT HAD ALREADY TAKEN PLACE.

PADER CONTACTED EPA'S REGION III OFFICE TO ASSIST IN SAMPLING DURING THE WELL PLUGGING IN THE FALL OF 1982. AFTER SUBSEQUENT ENVIRONMENTAL SAMPLING, THE PRESQUE ISLE SITE WAS PLACED ON EPA'S NATIONAL PRIORITIES LIST (NPL), A LIST OF HAZARDOUS WASTE SITES TARGETED FOR ACTION UNDER THE SUPERFUND PROGRAM, IN SEPTEMBER 1983. REASONS CITED WERE CONCERNS THAT THE SAME FLUID MIGHT BE SEEPING FROM OTHER ABANDONED GAS WELLS, OF SIMILAR AGE AND CONSTRUCTION, IN THE AREA.

SUBSEQUENT INVESTIGATIONS HAVE REVEALED THAT THE DISCHARGE RELEASED HYDROGEN SULFIDE GAS INTO THE ATMOSPHERE AND OTHER HAZARDOUS SUBSTANCES INTO THE SOIL AND SHALLOW GROUND WATER. BOTH PADER AND EPA HAVE SOUGHT TO DEFINE THE SOURCE OF THE DISCHARGE AND THE POTENTIAL FOR SIMILAR DISCHARGES IN THE ERIE AREA. THE CENTRAL ISSUE OF THEIR INVESTIGATIONS HAS BEEN WHETHER THE DISCHARGE IS A NATURAL PHENOMENON OR IF IT WAS RELATED TO THE DEEP-WELL INJECTION BY THE HAMMERMILL PAPER COMPANY OF APPROXIMATELY 1.1 BILLION GALLONS OF SPENT PULPING LIQUOR INTO THE BASS ISLAND FORMATION BETWEEN 1964 AND 1972.

THE RESULTS OF ALL STUDIES CONDUCTED ON THE PRESQUE ISLE SITE TO DATE HAVE BEEN ANALYZED IN THE RI/FS REPORT TITLED "SUMMARY OF INVESTIGATIONS AND RECOMMENDATIONS FOR FURTHER ACTION" (SCHOENER-EPA) PUBLISHED IN OCTOBER 1985. AVAILABLE CHEMICAL DATA PROVIDE AMBIGUOUS INFORMATION ABOUT THE SOURCE OF THE DISCHARGE AND SUGGEST THAT RESOLUTION OF THESE AMBIGUITIES WILL BE DIFFICULT. INVESTIGATIONS, HOWEVER, HAVE DETERMINED THAT THE DISCHARGE AT PRESQUE ISLE BEACH NO. 7 WELL WAS AN UNUSUAL EVENT, AND THAT THE THREAT TO THE PUBLIC WAS ELIMINATED WHEN THE BASS ISLAND FORMATION WITHIN THE WELL WAS PERMANENTLY PLUGGED IN 1982.

BASED ON THESE INVESTIGATIONS, EPA AND PADER ARE PROPOSING TO ADOPT A MINIMUM ACTION APPROACH, AS OUTLINED IN THE RI/FS RECOMMENDATIONS. THE RI/FS REPORT RECOMMENDED THAT THE MINIMUM ACTION APPROACH CONSIST OF TWO ACTIONS:

- 1) NOTIFY LOCAL OIL AND GAS DRILLERS THAT A HYDROGEN SULFIDE-BEARING BRINE IS PRESENT IN THE BASS ISLAND FORMATION, AND THAT DRILLERS SHOULD BE PREPARED TO SEAL WELLS IN THE FORMATION IF A HYDROGEN SULFIDE RELEASE OCCURS
- 2) MONITOR OIL AND GAS WELLS DRILLED THROUGH THE BASS ISLAND FORMATION FOR HIGH PRESSURES AND THE OCCURRENCE OF HYDROGEN SULFIDE ("BLACK WATER").

AT THE PRESENT TIME, EPA, IN CONJUNCTION WITH PADER, HAS DETERMINED THAT NO FURTHER REMEDIAL MEASURES ARE APPROPRIATE.

B. COMMUNITY RELATIONS

IN MEETING ITS PUBLIC OUTREACH RESPONSIBILITIES UNDER THE SUPERFUND PROGRAM, EPA INITIATED SEVERAL COMMUNITY RELATIONS ACTIVITIES. A DRAFT COMMUNITY RELATIONS PLAN WAS PREPARED AND ISSUED IN DECEMBER 1984. EPA ALSO ESTABLISHED INFORMATION REPOSITORIES FOR THE SITE AT: THE ERIE COUNTY PUBLIC LIBRARY, PRESQUE ISLE BRANCH; THE ERIE COUNTY HEALTH DEPARTMENT; AND THE PRESQUE ISLE STATE PARK RESEARCH LIBRARY. INTERESTED PERSONS CAN REVIEW REPORTS AND OTHER SITE INFORMATION AT THESE REPOSITORIES.

A SITE FACT SHEET ALSO WAS DEVELOPED AND DISTRIBUTED AT A PUBLIC

INFORMATION MEETING HELD TO OBTAIN PUBLIC INPUT ON THE PROPOSED REMEDY IN MILLCREEK TOWNSHIP, PENNSYLVANIA ON AUGUST 13, 1987. A COPY IS SHOWN IN APPENDIX A. A LIST OF ATTENDEES AT, AND A TRANSCRIPT OF, THE MEETING ARE PROVIDED IN APPENDICES B AND C, RESPECTIVELY.

THE PUBLIC COMMENT PERIOD RAN FROM AUGUST 12, 1987, THROUGH SEPTEMBER 18, 1987.

2.0 SUMMARY OF PUBLIC COMMENTS

A. COMMENTS ON THE PROPOSED REMEDY

PUBLIC COMMENTS ON THE PROPOSED REMEDY WERE TAKEN DURING THE PUBLIC MEETING AS WELL AS THROUGHOUT THE COMMENT PERIOD. FOURTEEN PEOPLE ATTENDED THE MEETING AND FOUR SUBMITTED WRITTEN COMMENTS. ONE RESPONDENT REPRESENTED A CITIZENS' GROUP FORMED TO ADDRESS THE LOCAL ENVIRONMENTAL ISSUES AND ONE THE LOCAL BRANCH OF A NATIONAL ENVIRONMENTAL GROUP.

ONE LOCAL RESPONDENT EXPRESSED SUPPORT FOR THE PROPOSED REMEDY, BASED ON A REVIEW OF THE FINDINGS OF THE RI/FS REPORT AND THE ABATEMENT OF HAZARD AT THE SITE DUE TO PLUGGING THE WELL. REPRESENTATIVES OF THE HAMMERMILL PAPER COMPANY ALSO SUPPORTED THE PROPOSED MINIMUM ACTION REMEDY FOR THE SITE BECAUSE THERE HAS BEEN NO EVIDENCE TO INDICATE ANY RECENT SEEPAGE FROM THE WELL, NOR TO SHOW THAT THE SITE CURRENTLY PRESENTS A HAZARD TO PUBLIC HEALTH OR THE ENVIRONMENT.

THE LOCAL ENVIRONMENTAL GROUP REPRESENTATIVE MAINTAINED THAT THE DECISION WAS PREMATURE, SINCE THERE MAY NOT HAVE BEEN SUFFICIENT STUDIES TO ASCERTAIN THE EXTENT OF HAZARD POSED BY THE SITE NOW, AND BECAUSE A NATURAL PHENOMENON SUCH AS AN EARTHQUAKE COULD CAUSE ANOTHER SEEPAGE INCIDENT. HE REQUESTED AN EXTENSION OF THE PUBLIC COMMENT PERIOD ON THE REMEDY TO ALLOW HIS GROUP TO CONDUCT INDEPENDENT STUDIES OF THE SITE AND TO REVIEW EXISTING MATERIAL CONTAINED IN THE INFORMATION REPOSITORIES.

B. OTHER QUESTIONS AND EPA RESPONSES

FOLLOWING IS A CONCISE SUMMARY OF SPECIFIC QUESTIONS AND COMMENTS RAISED BY THE PUBLIC DURING THE COMMENT PERIOD. THEY ARE GROUPED BY TOPIC.

POSITION ON THE REMEDIAL ALTERNATIVE

Q. A CITIZEN ASKED WHO WILL BE RESPONSIBLE FOR MONITORING THE OIL AND GAS WELL DRILLERS, WHICH WILL BE A PART OF THE RECOMMENDED REMEDY.

R. EPA STATED THAT THAT HAS NOT YET BEEN DECIDED, BUT WILL BE GIVEN FURTHER CONSIDERATION AS PART OF THE REMEDY.

Q. THE REPRESENTATIVE OF THE LOCAL ENVIRONMENTAL ORGANIZATION ASKED WHETHER OIL AND GAS WELL DRILLERS HAVE BEEN NOTIFIED OF THE PRESENCE OF BLACK WATER IN THE BASS ISLAND FORMATION. HE STATED THAT THIS RECOMMENDATION WAS MADE IN 1985 AND SOMETHING SHOULD BE DONE ABOUT IT SOON.

R. EPA RESPONDED THAT THIS IS A RECOMMENDATION OF THE RI/FS. IT HAS NOT YET BEEN IMPLEMENTED, BUT THAT THE AGENCY IS WORKING TOWARD THAT AND WILL PUT THIS ACTION INTO EFFECT AFTER THE REMEDY HAS BEEN SELECTED.

COMMENT: THE ENVIRONMENTAL REPRESENTATIVE RESPONDED THAT SOMEONE MUST BE MADE RESPONSIBLE FOR COORDINATING THIS ACTION.

COMMENT: A PRIVATE CITIZEN EXPRESSED HIS SUPPORT FOR THE RECOMMENDED REMEDY, EVEN THOUGH THE SITE IS LOCATED IN AN ENVIRONMENTALLY SENSITIVE AREA. HE BASED THIS OPINION ON THE EVIDENCE PRESENTED IN THE RI/FS REPORT THAT THE HAZARD HAS BEEN

ELIMINATED.

COMMENT: THE ENVIRONMENTAL REPRESENTATIVE COMMENTED THAT HE WAS CONCERNED THAT IT WAS PREMATURE TO IMPLEMENT THE PROPOSED REMEDY. HE POINTED OUT THE FACT THAT A NATURAL DISASTER, SUCH AS AN EARTHQUAKE, COULD CREATE NEW POTENTIAL FOR CONTAMINATION, AND WAS CONCERNED THAT EPA SEEMED TO BE RUSHING TO IMPLEMENT THIS ACTION AFTER A PERIOD OF LITTLE ACTION.

COMMENT: A HAMMERMILL REPRESENTATIVE STATED THAT HE ALSO SUPPORTED THIS ACTION. EVIDENCE INDICATES THAT THE SITE DOES NOT CURRENTLY POSE A HAZARD AND NO RECENT SEEPAGE HAS BEEN DETECTED THERE. A LETTER DATED AUGUST 28, 1987, FROM HAMMERMILL AGAIN REAFFIRMED THIS POSITION.

COMMENT: IN A LETTER DATED SEPTEMBER 13, 1987, A LOCAL HIGH SCHOOL TEACHER APPROVED THE RI/FS CONCLUSION. SHE ALSO SUGGESTED PERIODIC MONITORING OF WELLS, GROUND WATER, AND SOILS SHOULD THE SITE BE REMOVED FROM THE NPL.

COMMENT: A WRITTEN COMMENT FROM TWO PRIVATE CITIZENS URGED EPA TO CONSIDER ONLY A COMPLETE AND FINAL CLEANUP OF THIS SITE.

R. EPA FEELS THAT AT THE PRESENT TIME NO FURTHER RESPONSE ACTIONS ARE NECESSARY, BASED ON REMEDIAL INVESTIGATIONS PERFORMED BY BOTH EPA AND PADER.

TIMEFRAME FOR PUBLIC COMMENT ON THE RI/FS

COMMENT: THE REPRESENTATIVE OF THE LOCAL ENVIRONMENTAL GROUP STATED THAT THE ERIE COUNTY ENVIRONMENTAL COALITION IS FORMALLY REQUESTING AN EXTENSION OF THE COMMENT PERIOD, DUE TO THE VOLUME OF THE SUPPORTING DOCUMENTATION. HE STATED THAT THE GROUP HAD OBTAINED PEOPLE TO DO COMPUTER MODELING FOR THE SITE AND OTHER STUDIES, AND HAD BEEN UNAWARE OF SOME OF THE SITE INVESTIGATIONS AND DOCUMENTATION. THE SITE IS ALSO THE SUBJECT OF A GREAT DEAL OF INTEREST IN THE SCIENTIFIC COMMUNITY AND REQUIRES MORE TIME FOR COMMENT ON THE PROPOSED ACTIONS.

R. EPA REPRESENTATIVES SUGGESTED HOLDING A MEETING IN THE ERIE AREA OR THE REGION III OFFICE DURING THE COMMENT PERIOD TO PROVIDE INTERESTED GROUPS AN OPPORTUNITY TO OBTAIN SITE INFORMATION. THEY STATED THAT THEY HAD A RECORDS COMPILATION COMPLETED TO HELP THE PUBLIC REVIEW PRESQUE ISLE DOCUMENTATION, AND WOULD INVESTIGATE THE POSSIBILITY OF EXTENDING THE PUBLIC COMMENT PERIOD ON THE REMEDY FOR ONE WEEK TO TEN DAYS.

COMMENT: A REPRESENTATIVE OF HAMMERMILL REGISTERED A FORMAL OBJECTION TO THE REQUEST FOR ADDITIONAL TIME IN THE COMMENT PERIOD, SINCE SITE RECORDS HAD BEEN IN EXISTENCE AND OPEN TO THE PUBLIC FOR OVER SEVEN YEARS.

POSSIBLE NPL DELETION

COMMENT: A PRIVATE CITIZEN VOICED HIS AGREEMENT WITH EPA'S RECOMMENDATION TO DELETE THE SITE FROM THE NATIONAL PRIORITIES LIST, SINCE THERE IS NO EVIDENCE OF RECENT LEAKS AT THE SITE AND IT APPEARS TO PRESENT NO HAZARD.

COMMENT: THE REPRESENTATIVE OF THE LOCAL ENVIRONMENTAL GROUP STATED THAT THE 30-DAY REVIEW PERIOD IS NOT ENOUGH TIME TO LOOK AT DELETING THE SITE. HE POINTED TO THE BUTLER TUNNEL SITE AS AN EXAMPLE OF A SITE THAT HAD BEEN ON THE NPL, WAS DELETED FROM

THE LIST, AND WAS LATER PUT BACK ON, AND STATED THAT THERE IS A SIMILAR POSSIBILITY AT THE PRESQUE ISLE SITE.

R. EPA REPLIED THAT THE AGENCY IS NOT CURRENTLY LOOKING AT DELETING THE SITE FROM THE NPL, AND EXPLAINED THAT THE PUBLIC COMMENT PERIOD ON THE PROPOSED ACTION IS SEPARATE FROM SITE DELETION.

SITE STATUS

Q. A PRIVATE CITIZEN STATED THAT ON A RECENT VISIT TO THE SITE HE HAD NOTICED THAT THE PRESSURE GAUGE HAD A READING OF 25 PSI, AND ASKED WHETHER THIS WAS DUE TO NATURAL GAS OR HYDROGEN SULFIDE GAS PRESSURE.

R. EPA RESPONDED THAT SOMEONE WOULD CHECK THE GAUGE READING AS A RESULT OF THE COMMENT, BUT THAT THE MOST RECENT READING NOTED WAS 0 (ZERO). THE PRESSURE EXISTING CURRENTLY IN THE BEACH NO. 7 WELL IS A RESULT OF NATURAL GAS PRODUCTION, WHICH IS METERED BY THE STATE PARK OFFICE.

Q. A RESIDENT ASKED WHO IS NOW RESPONSIBLE FOR MONITORING THE WELL FOR NATURAL GAS OR HYDROGEN SULFIDE SINCE ON A RECENT VISIT HE HAD DETECTED THE ODOR OF NATURAL GAS NEAR THE WELL.

R. EPA EXPLAINED THAT THE WELL IS MONITORED ON A ROUTINE BASIS BY PADER. NO LEAKS HAVE BEEN FOUND AT ANY TIME.

COMMENT: A CONSULTANT FOR HAMMERMILL WHO WAS PRESENT AT THE WELL PLUGGING OPERATION STATED THAT THE WELL WAS CEMENTED UP TO 900 FEET, AND ALL FORMATIONS WERE CLOSED. ANY LEAK DETECTED NOW IN THE AREA IS PROBABLY DUE TO NATURAL GAS.

APPENDIX A

SUPERFUND PROGRAM
FACT SHEET

EPA
REGION III

PRESQUE ISLE SITE
RECOMMENDATIONS OF THE REMEDIAL
INVESTIGATION/FEASIBILITY STUDY

AUGUST 1987

INTRODUCTION

THIS FACT SHEET PRESENTS PROPOSED ACTIONS THAT THE U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA) AND THE PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES (PADER) MAY TAKE TO RESPOND TO RELEASES FROM THE PRESQUE ISLE HAZARDOUS WASTE SITE IN ERIE COUNTY, PENNSYLVANIA. EPA HAS PREPARED A REMEDIAL INVESTIGATION/FEASIBILITY STUDY (RI/FS) REPORT TO EVALUATE: 1) THE EXTENT OF THE CONTAMINATION PROBLEM AT THE SITE, 2) THE POTENTIAL RISKS TO PUBLIC HEALTH AND THE ENVIRONMENT, AND 3) THE STEPS TAKEN TO CORRECT THE PROBLEM. EPA IS SEEKING PUBLIC COMMENT ON THE REMEDY RECOMMENDED BY THE RI/FS REPORT PRIOR TO EPA AND PADER DECISION-MAKING.

FOLLOWING A BRIEF DESCRIPTION OF THE SITE AND ITS HISTORY, THE PROPOSED REMEDY IS DESCRIBED. FINALLY, AN EXPLANATION OF FUTURE SITE ACTIONS AT THE SITE IS GIVEN. WORDS IN THE TEXT THAT APPEAR IN BOLD FACE ARE DEFINED IN THE GLOSSARY AT THE END OF THIS FACT SHEET.

SITE DESCRIPTION AND HISTORY

THE PRESQUE ISLE SITE IS LOCATED ON A PENINSULA WHICH IS KNOWN AS THE PRESQUE ISLE STATE PARK NEAR THE CITY OF ERIE, IN ERIE COUNTY, PENNSYLVANIA (SEE MAP ON THE FOLLOWING PAGE). THE SITE AREA INCLUDES AN ABANDONED GAS WELL KNOWN AS PRESQUE ISLE BEACH NO. 7 WELL AND ITS SURROUNDING, CONTAMINATED AREA. THE SURROUNDING AREA IS COMPRISED OF A PORTION OF AN UNDERGROUND GEOLOGIC FORMATION WHICH IS KNOWN AS THE BASS ISLAND FORMATION. PROPERTY ON WHICH THE PRESQUE ISLE BEACH NO. 7 WELL IS LOCATED IS OWNED BY THE COMMONWEALTH OF PENNSYLVANIA. THE MAIN USE OF THE AREAS ADJACENT TO THE SITE IS FOR RECREATION.

PRESQUE ISLE BEACH NO. 7 WELL WAS DRILLED BY THE CITY OF ERIE IN 1910 FOR USE BY THE CITY WATERWORKS. IT EXTENDED 3,570 FEET THROUGH THE BASS ISLAND FORMATION AND INTO THE MEDINA FORMATION, AN UNDERGROUND FORMATION AT A LOWER DEPTH. IN THE 1920S, THE WELL WAS ABANDONED WITHOUT PLUGGING AND COVERED BY A CONCRETE ROAD SURFACE THAT WAS LATER COVERED WITH SAND. IN 1976, AFTER NUMEROUS COMPLAINTS FROM PARK VISITORS ABOUT A FOUL-SMELLING ODOR IN THE BEACH NO. 7 PARKING LOT, THE ERIE COUNTY HEALTH DEPARTMENT FILED A COMPLAINT WITH PARK OFFICIALS. THE COUNTY HEALTH DEPARTMENT NOTED A SEEP NEAR BEACH NO. 7 WELL THAT WAS DISCHARGING A NOXIOUS, HYDROGEN SULFIDE-BEARING, BLACK LIQUID.

IN MARCH 1979, PADER UNCOVERED THE WELL TO INVESTIGATE COMPLAINTS THAT THE ODORS WERE GETTING WORSE. THE WELL WAS IDENTIFIED AS THE SOURCE OF THE DISCHARGE AND WAS EQUIPPED WITH A BLEED VALVE AND PRESSURE GAUGE TO CONTROL DISCHARGE. PADER PERMANENTLY CAPPED THE WELL IN OCTOBER 1982. INVESTIGATIONS CONDUCTED AT THAT TIME DETERMINED THAT NO HEALTH HAZARDS WERE PRESENT AS A RESULT OF THE SEEPAGE THAT HAD ALREADY TAKEN PLACE.

PADER CONTACTED EPA'S REGION III OFFICE TO ASSIST IN SAMPLING AND PLUGGING THE WELL DURING THE FALL OF 1982. AFTER SUBSEQUENT ENVIRONMENTAL SAMPLING, THE PRESQUE ISLE SITE WAS PLACED ON EPA'S NATIONAL PRIORITIES LIST (NPL), A LIST OF HAZARDOUS WASTE SITES TARGETED FOR ACTION UNDER THE SUPERFUND PROGRAM, IN SEPTEMBER 1983. REASONS CITED WERE CONCERNS THAT THE SAME FLUID MIGHT BE SEEPING FROM OTHER ABANDONED GAS WELLS, OF SIMILAR AGE AND CONSTRUCTION, IN THE AREA.

SUBSEQUENT INVESTIGATIONS HAVE REVEALED THAT THE DISCHARGE RELEASED HYDROGEN SULFIDE INTO THE ATMOSPHERE AND OTHER HAZARDOUS SUBSTANCES INTO THE SOIL AND SHALLOW GROUND WATER. BOTH PADER AND EPA HAVE SOUGHT TO DEFINE THE SOURCE OF THE DISCHARGE AND THE POTENTIAL FOR SIMILAR DISCHARGES IN THE ERIE AREA. THE CENTRAL ISSUE OF THEIR INVESTIGATIONS HAS BEEN WHETHER THE DISCHARGE IS A NATURAL PHENOMENON OR IF IT WAS RELATED TO DEEP-WELL INJECTION BY A PRIVATE COMPANY OF APPROXIMATELY 1.1 BILLION GALLONS OF SPENT PULPING LIQUOR INTO THE BASS ISLAND FORMATION BETWEEN 1964 AND 1971.

THE PROPOSED REMEDY

THE RESULTS OF ALL STUDIES CONDUCTED ON THE PRESQUE ISLE SITE TO DATE HAVE BEEN ANALYZED IN THE REMEDIAL INVESTIGATION/FEASIBILITY STUDY (RI/FS) REPORT TITLED "SUMMARY OF INVESTIGATIONS AND RECOMMENDATIONS FOR FURTHER ACTION" (SCHOENER-EPA, 10/85). AVAILABLE CHEMICAL DATA PROVIDE AMBIGUOUS INFORMATION ABOUT THE SOURCE OF THE DISCHARGE AND SUGGEST THAT RESOLUTION OF THESE AMBIGUITIES WILL BE DIFFICULT. INVESTIGATIONS, HOWEVER, HAVE DETERMINED THAT THE DISCHARGE AT PRESQUE ISLE BEACH NO. 7 WELL WAS AN UNUSUAL EVENT, AND THAT THE THREAT TO THE PUBLIC WAS ELIMINATED WHEN THE WELL WAS PERMANENTLY PLUGGED IN 1982. AS A RESULT, THE ONLY KNOWN SOURCE OF SEEPAGE HAS BEEN CAPPED. POTENTIAL FOR DIRECT EXPOSURE HAS ALSO BEEN MINIMIZED BY COVERING THE PAST SEEPAGE WITH FRESH SAND AND THERE ARE NO DRINKING WATER WELLS IN USE ON THE PENINSULA. NO MIGRATION PATHWAYS HAVE BEEN RECOGNIZED.

BASED ON THESE INVESTIGATIONS, EPA AND PADER ARE PROPOSING TO ADOPT A MINIMUM ACTION APPROACH, AS OUTLINED IN THE RI/FS RECOMMENDATIONS. THE RI/FS REPORT RECOMMENDED THAT THE MINIMUM ACTION APPROACH CONSIST OF TWO ACTIONS:

- 1) NOTIFY LOCAL OIL AND GAS DRILLERS THAT A HYDROGEN SULFIDE-BEARING BRINE IS PRESENT IN THE BASS ISLAND FORMATION, AND THAT DRILLERS SHOULD BE PREPARED TO SEAL WELLS IN THE FORMATION IF A HYDROGEN SULFIDE RELEASE OCCURS
- 2) MONITOR OIL AND GAS WELLS DRILLED THROUGH THE BASS ISLAND FORMATION FOR HIGH PRESSURES AND THE OCCURRENCE OF HYDROGEN SULFIDE ("BLACK WATER").

THE THIRD FINDING OF THE REPORT WAS THAT EXISTING INFORMATION DOES NOT WARRANT THE COSTS AND ENVIRONMENTAL RISKS ASSOCIATED WITH A DRILLING PROGRAM TO DEFINE THE ORIGIN OF THE DISCHARGE AT BEACH NO. 7 WELL. THIS FINDING WILL BE REVISITED IF THE MONITORING OF OIL AND GAS WELLS, DESCRIBED ABOVE, DETECTS A PROBLEM. EACH ACTION AND THE FINDING IS FURTHER EXPLAINED BELOW.

THE FIRST COMPONENT OF THE REMEDY IS NOTIFICATION OF OIL AND GAS WELL DRILLERS OF THE PRESENCE OF SULFUR-LADEN BLACK WATER IN THE BASS ISLAND FORMATION AND A REQUIREMENT TO SEAL THE FORMATION IF SULFUR WATER IS ENCOUNTERED. THE ACTION WOULD BE TAKEN WHENEVER A WELL IS DRILLED THROUGH THE BASS ISLAND FORMATION. THE CURRENT INFORMATION THAT OIL AND GAS WELL DRILLERS HAVE IS THAT THE BASS ISLAND FORMATION IS A CLEAR BRINE, AND, THUS, DOES NOT POSE A THREAT TO THE ENVIRONMENT OR PUBLIC HEALTH. DRILLERS MUST BE MADE AWARE OF POTENTIAL PROBLEMS AND BE PREPARED TO TAKE CORRECTIVE ACTION IF A SEEP PROBLEM OCCURS.

THE SECOND COMPONENT OF THE REMEDY IS CLOSE MONITORING OF ALL OIL AND GAS WELLS DRILLED IN NORTHERN ERIE COUNTY FOR HIGH PRESSURE AND/OR BLACK WATER IN THE BASS ISLAND FORMATION. THIS WOULD PROVIDE ADDITIONAL INFORMATION ON WHETHER THERE IS A PROBLEM SUFFICIENT TO WARRANT THE EXPENDITURE OF SIGNIFICANT RESOURCES TO CONDUCT MORE IN-DEPTH INVESTIGATIONS.

THE FINAL COMPONENT OF THE REMEDY IS THE FINDING THAT INSTALLATION OF MONITORING WELLS IN THE BASS ISLAND FORMATION IS NOT NECESSARY. OTHER THAN THE DISCHARGE FROM THE PRESQUE ISLE WELL AND ANOTHER

INCIDENT, THERE HAVE BEEN NO REPORTED DISCHARGES. ANY ATTEMPT TO DEFINE CONCLUSIVELY THE SOURCE OF THE DISCHARGE WOULD REQUIRE DRILLING WELLS DIRECTLY INTO THE FORMATION, AT A COST OF APPROXIMATELY \$150,000 TO \$200,000 FOR EACH WELL. THERE WOULD ALSO BE RISKS ASSOCIATED WITH DRILLING THESE WELLS BECAUSE OF THE SULFUR WATER ENCOUNTERED AND THE POTENTIAL FOR SIGNIFICANT AMOUNTS OF HYDROGEN SULFIDE GAS TO BUILD UP BETWEEN TESTS AND CAUSE ANOTHER RELEASE. THE POSSIBILITY OF DRILLING WELLS TO MONITOR THE BASS ISLAND FORMATION WILL BE RE-EXAMINED IF THE MONITORING PROGRAM PROPOSED IN THE SECOND COMPONENT OF THIS REMEDY IDENTIFIES SIGNIFICANT PROBLEMS.

OPPORTUNITIES FOR COMMENT ON THE PROPOSED REMEDY

PUBLIC COMMENT ON THE PROPOSED REMEDY WILL BE ACCEPTED THROUGH SEPTEMBER 11, 1987. DIRECT WRITTEN COMMENTS, QUESTIONS, AND REQUESTS FOR INFORMATION TO:

PATRICIA TAN, ENFORCEMENT
PROJECT OFFICER
U.S. EPA, REGION III
841 CHESTNUT STREET
PHILADELPHIA, PA 19107
(215) 597-3164

ANN CARDINAL, COMMUNITY
RELATIONS COORDINATOR
U.S. EPA, REGION III
841 CHESTNUT STREET
PHILADELPHIA, PA 19107
(215) 597-9905.

COPIES OF THE RI/FS REPORT AND OTHER INFORMATION ABOUT THE PRESQUE ISLE SITE ARE AVAILABLE FOR REVIEW AT THE FOLLOWING LOCATIONS:

PRESQUE ISLE STATE PARK RESEARCH LIBRARY PENINSULA DRIVE ERIE, PA 16505 (814) 871-4251	ERIE COUNTY HEALTH DEPARTMENT 606 W. SECOND STREET ERIE, PA 16507 (814) 454-5811	ERIE COUNTY LIBRARY PRESQUE ISLE BRANCH 902 W. ERIE PLACE ERIE, PA 16505 (814) 453-5763.
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NEXT STEPS

FOLLOWING THE CONCLUSION OF THE 30-DAY PUBLIC COMMENT PERIOD, A RESPONSIVENESS SUMMARY WILL BE PREPARED WHICH SUMMARIZES CITIZENS' COMMENTS ON THE PROPOSED REMEDY AND EPA'S RESPONSES. THEREAFTER, EPA AND PADER WILL PREPARE A FORMAL DECISION DOCUMENT THAT SUMMARIZES THE DECISION PROCESS AND THE SELECTED REMEDY. THIS DOCUMENT WILL INCLUDE THE RESPONSIVENESS SUMMARY.

IF THE MINIMUM ACTION ALTERNATIVE IS SELECTED FOR THE PRESQUE ISLE SITE, ACTIONS WILL BE TAKEN TO DELETE THE SITE FROM THE NPL. IN ORDER TO DO SO, THERE MUST FIRST BE A TECHNICAL EVALUATION TO DETERMINE THAT THE PRESQUE ISLE SITE MEETS THE ESTABLISHED DELETION CRITERIA. EPA, IN CONSULTATION WITH THE STATE, MUST FIND, AND THE AVAILABLE DATA CONFIRM, THAT THE SITE POSES NO THREAT TO PUBLIC HEALTH OR THE ENVIRONMENT. DELETION OF THE SITE FROM THE NPL DOES NOT MAKE THE PRESQUE ISLE SITE INELIGIBLE FOR LATER GOVERNMENT-FINANCED ACTIONS, IF ANY MEASURES ARE NEEDED. EPA WILL RE-EVALUATE THE SITE PERIODICALLY TO ENSURE THAT IT CONTINUES TO POSE NO THREAT TO THE PUBLIC HEALTH OR THE ENVIRONMENT.

GLOSSARY

FORMATION: THE PRIMARY UNIT OF FORMAL MAPPING OR DESCRIPTION. MOST FORMATIONS POSSESS CERTAIN DISTINCTIVE, OR COMBINATIONS OF DISTINCTIVE, ROCK OR SEDIMENTARY FEATURES.

NATIONAL PRIORITIES LIST (NPL): EPA'S LIST OF THE TOP PRIORITY HAZARDOUS WASTE SITES IN THE COUNTRY THAT ARE ELIGIBLE TO RECEIVE FEDERAL MONEY FOR RESPONSE UNDER SUPERFUND.

REMEDIATION INVESTIGATION/FEASIBILITY STUDY (RI/FS): THE RI/FS IS A TWO-PART STUDY WHICH IS COMPLETED BEFORE THE DECISION TO UNDERTAKE A CLEANUP ACTION AT A SITE IS MADE. THE FIRST PART IS THE REMEDIATION INVESTIGATION (RI), WHICH STUDIES THE NATURE AND EXTENT OF THE PROBLEM

AT A SITE. THE SECOND PART IS THE FEASIBILITY STUDY (FS), WHICH EVALUATES DIFFERENT METHODS OF DEALING WITH THE PROBLEM AND SELECTION OF THE PREFERRED METHOD WHICH WILL EFFECTIVELY PROTECT THE PUBLIC HEALTH AND THE ENVIRONMENT.

SEEP: A SPOT WHERE WATER OR PETROLEUM OOZES FROM THE EARTH, OFTEN FORMING THE SOURCE OF A SMALL TRICKLING STREAM.

SUPERFUND: THE COMMON NAME USED FOR THE COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT, ALSO REFERRED TO AS THE TRUST FUND. THE SUPERFUND PROGRAM WAS ESTABLISHED TO HELP PAY FOR CLEANUP OF HAZARDOUS WASTE SITES AND TO TAKE LEGAL ACTION TO FORCE THOSE RESPONSIBLE FOR THE SITES TO CLEAN THEM UP.

APPENDIX B

PRESQUE ISLE PUBLIC MEETING
WEST LAKE JR. HIGH SCHOOL
ERIE, PENNSYLVANIA

AUGUST 13, 1987 - 7:30 P.M.

PAT TAN	U.S. EPA
KAREN WOLPER	U.S. EPA
GREGG CRYSTALL	U.S. EPA
DEBRA MILLER	U.S. EPA
MARK GORMAN	PA DER
SCOTT T. LEE	PRIVATE CITIZEN 3818 BLOSSOM TERRACE, ERIE, PA 16505
DAVID D. AURORA	PRIVATE CITIZEN
DAN BROCKI	
BILL WELCH	ERIE COUNTY ENVIRONMENTAL COALITION
BILL KENEDY	
ROB E. SIDMAN	MILLCREEK TOWNSHIP
STEPHEN J. CRUISE	
JAMES H. SPEICE	HAMMERMILL PAPER CO.
TRUMAN O. ANDREWS	HAMMERMILL PAPER CO.
TIMOTHY M. YEAGER	HAMMERMILL PAPER CO.
JOHN WRIGHT, JR.	IT CORPORATION
GENE GIZA	PRESQUE ISLE STATE PARK
GREG SCHRUM	HARRISBURG
CAROLYN STURTWANT	PRESQUE ISLE AUDUBON SOCIETY.

APPENDIX C

PUBLIC MEETING TRANSCRIPT

COMMONWEALTH OF PENNSYLVANIA,)
COUNTY OF ERIE.)

IN THE MATTER OF:

U. S. ENVIRONMENTAL PROTECTION AGENCY
PUBLIC MEETING REGARDING PRESQUE ISLE
BEACH NO. 7, PRESQUE ISLE STATE PARK.

TRANSCRIPT OF PUBLIC MEETING HELD AT THE WEST
LAKE JUNIOR HIGH SCHOOL, MILLCREEK TOWNSHIP AUDITORIUM
4330 WEST LAKE ROAD, ERIE, PENNSYLVANIA, COMMENCING AT
7:45 O'CLOCK P.M. ON THURSDAY, AUGUST 13, 1987.

SPEAKERS:

DEBRA MILLER - COMMUNITY RELATIONS COORDINATOR -
EPA
PATRICIA TAN, PROJECT OFFICER - EPA.

PROCEEDINGS

MS. MILLER: I WANT TO WELCOME YOU ALL
HERE AND THANK YOU FOR COMING TONIGHT FOR THE PRESQUE
ISLE PUBLIC HEARING. MY NAME IS DEBRA MILLER, I WORK
FOR THE ENVIRONMENTAL PROTECTION AGENCY, AND I'M A
COMMUNITY RELATIONS COORDINATOR.

I'D LIKE TO INTRODUCE PAT TAN, SHE'S A
PROJECT OFFICER, AND MARK GORMAN IS THE SITE PROJECT
OFFICER FOR THE PENNSYLVANIA DEPARTMENT OF
ENVIRONMENTAL RESOURCES. PAT IS GOING TO GIVE A
PRESENTATION.

IF YOU HAVEN'T ALREADY SIGNED IN, THERE IS
A SIGNUP SHEET, IF YOU WOULD LIKE TO DO THAT, WE WILL
BE COMPILING A MAILING LIST FOR ANY FUTURE MAILINGS.
IF YOU WANT TO FILL THAT OUT WHEN YOU LEAVE, FEEL FREE
TO DO THAT. THERE IS ALSO A FACT SHEET OUT THERE, WE
ARE GOING TO BE FOLLOWING SOME OF THE INFORMATION IN
THE FACT SHEET TONIGHT, YOU MIGHT WANT TO TAKE THAT
HOME AND LOOK AT IT.

ALSO, IF YOU HAVEN'T ALREADY SEEN THE
REPORT, THERE IS A PRESQUE ISLE REPORT, IT'S AT THREE
REPOSITORIES IN THE COMMUNITY, IT'S AT THE PRESQUE
ISLE BRANCH OF THE ERIE COUNTY LIBRARY, AND AT THE
RESEARCH LIBRARY AREA AT PRESQUE ISLE STATE PARK, AND
ALSO AT THE COUNTY HEALTH DEPARTMENT, EACH OF THOSE
LOCATIONS HAS A REPORT.

IF YOU FEEL THERE SHOULD BE MORE OUT IN
THE COMMUNITY, WE CAN STICK A FEW MORE OUT THERE. I
HAVE ONE OR TWO WITH ME TONIGHT IF PEOPLE WANT TO COME
UP AND TAKE A LOOK AT IT.

BASICALLY THE AGENDA FOR THE MEETING IS
JUST TO GO OVER THE PROPOSED RECOMMENDATION, AND THE
ALTERNATIVES FOR THE PRESQUE ISLE SITE. PAT WILL BE
GOING INTO A LITTLE MORE DETAIL ABOUT THAT.

ALSO, THIS IS THE BEGINNING OF THE PUBLIC
COMMENT PERIOD, WE WANT TO URGE EVERYONE IF YOU HAVE
COMMENTS, TO MAKE THEM IN WRITING, OR TONIGHT IF YOU
WANT TO GIVE COMMENTS IN PERSON, WE HAVE A COURT
STENOGRAPHER HERE, THIS WILL BE PART OF THE OFFICIAL
RECORD. IF YOU WANT TO GIVE A COMMENT, SPEAK UP AS
MUCH AS YOU CAN, GIVE YOUR NAME BEFOREHAND SO SHE CAN
TAKE THAT DOWN.

OKAY, BASICALLY I WILL INTRODUCE PAT,

SHE'LL GO THROUGH A SHORT PRESENTATION AND WE'LL OPEN IT UP FOR QUESTIONS, SO FEEL FREE TO JUMP IN AFTER THE PRESENTATION.

THIS IS PAT TAN.

MS. TAN: THE FIRST THING I'D LIKE TO DO IS TO GO THROUGH A BRIEF BACKGROUND CONCERNING THE SITE, SUMMARIZE OUR CONCLUSIONS RELATED TO THE STUDIES THAT WERE PERFORMED BY MANY, MANY PEOPLE AND AGENCIES, AND THEN GO THROUGH WHAT OUR RECOMMENDATION IS REGARDING THE SITE AND A LITTLE BIT OF THE RATIONALE BEHIND THAT AND GIVE YOU HOW WE WILL PROCEED WITH THESE RECOMMENDATIONS AND GIVE YOU AN IDEA OF THE STATUS OF THE SITE IN THE MONTHS TO COME.

ALL OF THIS INFORMATION CAN BE FOUND IN THAT FACT SHEET, AND IF YOU HAVE ANY QUESTIONS I WILL CERTAINLY BE GLAD TO ANSWER THEM AFTER I GO THROUGH ALL THIS INFORMATION.

IN THE EARLY '70'S A FOUL SMELLING AND SULFUR LADEN BLACK LIQUID BEGAN DISCHARGING NEAR BEACH WELL NO. 7 AT THE PRESQUE ISLE STATE PARK LOCATED IN ERIE, PENNSYLVANIA. THE SOURCE REMAINED SOMEWHAT OF A MYSTERY UNTIL 1979 WHEN THE PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES UNEARTHED THE LEAKING ABANDONED NATURAL GAS WELL THAT WAS A SOURCE OF THE NOXIOUS SEEP.

THE FORMATION WHICH PRODUCED THE SEEPING LIQUID WAS THE UPPER SILURIAN BASS ISLAND DOLOMITE AT A DEPTH OF 1,521 FEET TO APPROXIMATELY 1,586 FEET. THE DISCHARGE RELEASED HYDROGEN SULFIDE INTO THE ATMOSPHERE AND OTHER HAZARDOUS SUBSTANCES INTO THE SOIL.

EARLY INVESTIGATIONS CONDUCTED BY THE ERIE COUNTY DEPARTMENT OF HEALTH IN THE EARLY '70'S BY PADER FROM 1979 TO '83, AND BY THE U.S. EPA AND PADER FROM '83 TO THE PRESENT, HAVE SOUGHT TO BETTER DEFINE THE CAUSE OF THE DISCHARGE AND POTENTIAL FOR SIMILAR DISCHARGES TO CREATE ENVIRONMENTAL AND PUBLIC HEALTH HAZARDS IN THE ERIE AREA.

THE CENTRAL ISSUE IN THESE INVESTIGATIONS HAS BEEN WHETHER THE DISCHARGE WAS A NATURAL PHENOMENA OR WHETHER IT WAS RELATED TO THE DEEP WELL INJECTION OF APPROXIMATELY 1.1 BILLION GALLONS OF SPENT PUMPING LIQUOR INTO THE BASS ISLAND FORMATION DURING '64 TO '71. THESE TWO ALTERNATIVE EXPLANATIONS FOR THE SEEPING GAS WELL WERE INVESTIGATED BY SOME OF THE MOST SOPHISTICATED CHEMICAL TESTING AND MATHEMATICAL SIMULATIONS OF THE DEEP WELL INJECTION SYSTEM CURRENTLY AVAILABLE.

THE STATE OF PENNSYLVANIA PLUGGED THE SEEPING WELL IN THE FALL OF '82. PADER'S ENVIRONMENTAL CONSULTANT, ROY F. WESTON, INC., INVESTIGATED BEACH NO. 7 AND DETERMINED THAT NO HEALTH HAZARDS WERE PRESENT AS A RESULT OF THE SEEPAGE WHICH HAD ALREADY TAKEN PLACE.

CLEAN SAND WAS BROUGHT IN TO COVER THE AREA SURROUNDING THIS PLUGGED WELL. BEACH NO. 7 WELL SITE WAS PLACED ON THE NATIONAL PRIORITY LIST, OR NPL, IN SEPTEMBER 1983 BECAUSE THE U.S. EPA AND THE U.S. GEOLOGIC SURVEY WERE CONCERNED THAT THE SAME NOXIOUS FLUID MIGHT ALSO BE SEEPING FROM OTHER ABANDONED GAS WELLS OF SIMILAR AGE AND CONSTRUCTION IN THE ERIE AREA.

THE U.S. EPA FIELD INVESTIGATION TEAM SAMPLED DOMESTIC WATER WELLS IN THE ERIE AREA NEAR SIMILAR ABANDONED OIL AND NATURAL GAS WELLS AND

DETERMINED THAT NONE OF THE WATER WELLS SHOWED ANY EFFECTS THAT WOULD INDICATE THAT THE NEARBY OIL AND GAS WELLS WERE LEAKING.

OTHER OIL AND GAS WELLS IN THE ERIE AREA WERE SAMPLED TO DETERMINE WHETHER THE BASS ISLAND FORMATION FLUID FROM THESE WELLS WERE CHEMICALLY SIMILAR TO THE FLUID WHICH HAD SEEPED FROM BEACH WELL NO. 7.

WELLS WERE SAMPLED VERY NEAR TO THE UNDERGROUND INJECTION WELLS AND FROM A WELL LOCATED FAR BEYOND THE AREA WHERE THE SPENT PULPING LIQUOR COULD BE EXPECTED TO HAVE MOVED WITHIN THE BASS ISLAND FORMATION.

CHEMICAL TESTING WAS UNABLE TO POSITIVELY LINK THE DISCHARGE WITH THE INJECTED SPENT PULPING LIQUOR. DRILLER'S LOGS OF OIL AND NATURAL GAS WELLS FROM LARGE PORTIONS OF ERIE COUNTY INDICATE 204 OCCURRENCES OF BLACK WATER, A BASS ISLAND FORMATION FLUID WHICH NATURALLY RESEMBLES THE NOXIOUS FLUID ENCOUNTERED AT BEACH NO. 7 WELL.

ADDITIONALLY, THE ADJACENT COUNTIES IN NEW YORK ALSO HAVE SIMILAR FORMATION FLUIDS IN THE BASS ISLAND FORMATION.

MATHEMATICAL SIMULATIONS ON COMPUTERS OF THE DEEP WELL INJECTION SYSTEM'S EFFECT ON THE FORMATION PRESSURES OF THE BASS ISLAND DOLOMITE WERE ALSO UNABLE TO POSITIVELY LINK THE DEEP WELL INJECTION SYSTEM WITH THE SEEPING BEACH NO. 7 NATURAL GAS WELL.

THESE SIMULATIONS INDICATE THAT IT WOULD BE QUITE DIFFICULT FOR THE CHEMICAL CONSTITUENTS OF THE INJECTED SPENT PULPING LIQUOR TO HAVE BOTH MIGRATED APPROXIMATELY FOUR MILES FROM THE INJECTION WELLS TO BEACH NO. 7 WELL AND HAVE MAINTAINED ENOUGH PRESSURE TO CAUSE THE SEEPAGE FOR TEN YEARS FOLLOWING THE SEALING OF THE INJECTION WELLS.

THE SIMULATIONS DO SUGGEST THAT THE INJECTION LIQUOR COULD NOT BE EXPECTED TO HAVE MOVED FAR ENOUGH TO EXPLAIN THE OCCURRENCES OF BLACK WATER IN THE 204 WELLS IN ERIE COUNTY OR OTHER WELLS IN NEW YORK.

THE CHEMICAL TESTING PROVIDED ENOUGH INFORMATION TO ESTABLISH THAT THE FLUID WHICH WAS FORMERLY SEEPING FROM BEACH NO. 7 WELL WAS VERY SIMILAR TO THE HAZARDOUS FORMATION FLUIDS WHICH OIL AND GAS DRILLERS NORMALLY ENCOUNTER IN ROUTINE DRILLING IN ERIE COUNTY.

OIL AND GAS DRILLING IS REGULATED BY PADER'S BUREAU OF OIL AND GAS MANAGEMENT, AND PROCEDURES FOR RESPONDING TO PROBLEMS ASSOCIATED WITH HAZARDOUS FORMATION FLUIDS ARE ALREADY IN PLACE.

THE ONLY KNOWN PROBLEMS ASSOCIATED WITH HAZARDOUS FLUIDS SEEPING FROM ABANDONED OIL AND NATURAL GAS WELLS IN THE ERIE AREA WAS BEACH NO. 7 WELL. THE HEALTH HAZARD FROM THIS WELL WAS ELIMINATED WHEN PADER PLUGGED THE WELL IN '82. FURTHER ATTEMPTS TO BETTER DEFINE THE SOURCE OF THE SEEPAGE AT THAT WELL WOULD INVOLVE DRILLING VERY EXPENSIVE MONITORING WELLS WHICH MIGHT NOT RESOLVE THE ISSUE, AND COULD PRESENT AN UNNECESSARY ENVIRONMENTAL RISK.

BASED ON THE INVESTIGATIONS THAT HAVE BEEN OUTLINED IN THE REMEDIAL INVESTIGATION AND FEASIBILITY STUDY REPORT DATED OCTOBER, 1985 BY SHOENER, AND ON A RECORDS COMPILATION WHICH WAS PERFORMED BY VERSAR FOR EPA AND FINAL THIS AUGUST, WE HAVE THE FOLLOWING RECOMMENDATIONS TO CONSIDER FOR THIS SITE.

THE FIRST ONE IS NOTIFY OIL AND GAS WELL DRILLERS OF THE PRESENCE OF SULFUR LADEN BLACK WATER

IN THE BASS ISLAND FORMATION AND REQUIRE THE FORMATION TO BE SEALED IF THE SULFUR WATER IS ENCOUNTERED AND FOUND TO POSE A POTENTIAL HAZARD. THIS ACTION SHOULD BE TAKEN WHENEVER A WELL IS DRILLED THROUGH THE BASS ISLAND FORMATION. IT IS REPORTED THAT THE GENERAL KNOWLEDGE OF OIL AND GAS WELL DRILLERS IS THAT THE BASS ISLAND FORMATION IS A CLEAR BRINE. DRILLERS SHOULD BE AWARE OF THE POTENTIAL PROBLEMS AND BE PREPARED TO TAKE CORRECTIVE ACTION IF NECESSARY.

THE SECOND RECOMMENDATION IS CLOSELY MONITOR ALL OIL AND GAS WELLS DRILLED IN NORTHERN ERIE COUNTY FOR HIGH PRESSURES AND/OR BLACK WATER IN THE BASS ISLAND FORMATION.

ADDITIONAL INFORMATION ON THE FORMATION WOULD BE VERY USEFUL IN DETERMINING IF THERE IS A PROBLEM SUFFICIENT ENOUGH TO WARRANT THE EXPENDITURE OF SIGNIFICANT GOVERNMENT RESOURCES TO CONDUCT MORE INDEPTH INVESTIGATIONS.

THE THIRD RECOMMENDATION WAS THE INSTALLATION OF MONITORING WELLS IN THE BASS ISLAND FORMATION IS NOT NECESSARY BASED ON CURRENT INFORMATION. OTHER THAN THE DISCHARGE FROM THE PRESQUE ISLE WELL AND THE BLOW-OUT AT THE HAMMERMILL INJECTION WELL, THERE HAVE BEEN NO REPORTED DISCHARGES. TO ATTEMPT TO CONCLUSIVELY DEFINE THE SOURCE OF THE PRESQUE ISLE DISCHARGE WOULD INVOLVE DRILLING WELLS INTO THE BASS ISLAND FORMATION. EACH WELL WOULD COST APPROXIMATELY \$150,000 INCLUDING ANALYTICAL AND OTHER COSTS. IF CORES OF THE FORMATION WERE COLLECTED, THE COST PER WELL WOULD INCREASE BY AT LEAST \$50,000. THERE WOULD ALSO BE RISKS ASSOCIATED WITH DRILLING SUCH WELLS BECAUSE THE SULFUR WATER COULD BE ENCOUNTERED AND THE HYDROGEN SULFIDE GAS COULD BUILD UP TO SIGNIFICANT LEVEL WHILE THE WELLS WERE BEING CAPPED BETWEEN TESTS.

IN THE ABSENCE OF FURTHER INFORMATION REGARDING THE OCCURRENCE OF ELEVATED PRESSURES AND SULFUR WATER IN THE BASS ISLAND FORMATION, THE COSTS AND RISKS ASSOCIATED WITH THE INSTALLATION OF MONITORING WELLS IS NOT WARRANTED AT THIS TIME.

THE NEXT STEPS WHICH WILL OCCUR REGARDING THIS SITE ARE THE FOLLOWING: RIGHT NOW IS THE START OF THE 30 DAY PUBLIC COMMENT PERIOD, A RESPONSIVENESS SUMMARY WILL BE PREPARED WHICH SUMMARIZES THE CITIZENS' COMMENTS AND OTHER COMMENTS ON THE PROPOSED REMEDY WHICH I'VE JUST OUTLINED, AND ALL OF EPA'S RESPONSES TO THOSE COMMENTS. THEREAFTER, EPA AND PADER WILL PREPARE A FORMAL DECISION DOCUMENT THAT SUMMARIZES THE DECISION PROCESS AND THE SELECTED REMEDY. THIS DOCUMENT WILL INCLUDE THE RESPONSIVENESS SUMMARY.

IF THE MINIMUM ACTION ALTERNATIVE IS SELECTED FOR THE PRESQUE ISLE SITE, ACTIONS WILL BE TAKEN TO DELETE THE SITE FROM THE NPL. IN ORDER TO DO SO, THERE MUST FIRST BE A TECHNICAL EVALUATION TO DETERMINE THAT THE PRESQUE ISLE SITE MEETS THE ESTABLISHED CRITERIA FOR SELECTION. EPA, IN CONSULTATION WITH THE STATE, MUST FIND, AND THE AVAILABLE DATA CONFIRM THAT THE SITE POSES NO THREAT TO THE PUBLIC HEALTH OR THE ENVIRONMENT.

DELETION OF THE SITE FROM THE NPL DOES NOT MAKE THE PRESQUE ISLE SITE INELIGIBLE FOR LATER GOVERNMENT-FINANCED ACTIONS IF ANY MEASURES ARE NEEDED. EPA WILL REEVALUATE THE SITE PERIODICALLY TO ENSURE THAT IT CONTINUES TO POSE NO THREAT TO THE PUBLIC HEALTH OR ENVIRONMENT.

THE END.

IF ANYONE HAS ANY COMMENTS, DEBBIE AND I WOULD CERTAINLY LIKE TO HEAR THEM AND RESPOND.

MS. MILLER: IF YOU DO, PLEASE MAYBE STAND UP, IF YOU WANT TO GIVE YOUR NAME, JUST STATE YOUR NAME BEFORE THE QUESTION.

MR. LEE: MY NAME IS SCOTT LEE, AND I'M A PRIVATE CITIZEN OF ERIE. AND I JUST HAVE A COUPLE QUESTIONS AND THEN A COUPLE COMMENTS AT THE END.

I WAS OUT AT THE WELL TODAY, AND I WAS JUST TAKING A LOOK AT IT, AND I NOTICE THAT ON THE WELL THERE IS A PRESSURE GAUGE. AND THE PRESSURE GAUGE READS 25 PSI, AND WHILE THAT ISN'T A GREAT PRESSURE. A, IS THIS NATURAL GAS, OR IS IT A BUILDUP OF HYDROGEN SULFIDE? THE WELL WAS PLUGGED, OKAY, BUT THERE IS A PRESSURE GAUGE ON THE WELL THAT SAYS 25 PSI, IS THAT JUST AN ERROR IN THE GAUGE, OR IS THERE SOME PRESSURE?

MS. TAN: WHICH GAUGE WAS IT? BECAUSE I LOOKED AT THEM, ALSO, AND I SAW ZERO ON THEM. I'LL HAVE TO GO BACK OUT AND CHECK.

MR. LEE: THE ONE ON THE GROUND SAYS ZERO, WHEN YOU LOOK AT IT, LOOKING TOWARD THE LAKE, THE ONE THAT'S ABOVE THE GROUND, IT'S A WHITE GAUGE, IT SAYS 25 PSI.

MS. TAN: I WILL HAVE TO GO OUT AND CHECK AGAIN, BUT I THOUGHT I SAW ZERO ON THOSE GAUGES.

MR. LEE: ALSO, AND THIS IS INTERESTING, BUT WHEN WE WERE OUT THERE, I SMELLED NATURAL GAS AS I WAS STANDING RIGHT NEXT TO THE WELL, SO I DON'T KNOW WHERE THAT'S COMING FROM, BUT I DISTINCTLY DID SMELL IT, SO IT'S MY GUESS THAT THE PRESSURE BUILDING UP INSIDE THIS WELL IS PROBABLY NATURAL GAS AND NOT HYDROGEN SULFIDE. IS THAT IS THE CASE, THE WELL IS LEAKING, SOMEBODY SHOULD TAKE A LOOK AT IT BECAUSE I DID SMELL THAT.

MS. TAN: OKAY.

MR. LEE: SO THAT MAY BE A RECOMMENDATION.

ALSO, I READ THE FEASIBILITY STUDY THE OTHER DAY AND I NOTICE THAT ORIGINALLY WHEN THE EPA HEARD THERE WAS A CONCENTRATION OF 22,000 PARTS PER MILLION, THAT'S LETHAL, AND WHAT I WANT TO KNOW IS, NOW THEY SAID THE WELL WASN'T CAPPED IT WAS PLUGGED, IF THEY DID CAP THE WELL THERE WOULD BE A BUILDUP OF PRESSURE OF THE HYDROGEN SULFIDE ASSUMING THE STUFF IS STILL UNDERNEATH THERE, WHICH I ASSUME IT IS, IS THERE ANY -- WHEN THE ALTERNATIVES WERE BEING FORMULATED FOR THE RI/FS, WAS THERE ANY CONSIDERATION TO MONITOR PRESSURE BUILDUP OF THE HYDROGEN SULFIDE GAS?

MS. TAN: FOR THAT PARTICULAR WELL?

MR. LEE: YES. BECAUSE ORIGINALLY THAT'S WHERE THE SEEP HAD OCCURRED, AND THAT'S WHERE THE CONCENTRATION PROBLEM IS.

MS. TAN: THAT WELL IS MONITORED, AND PEOPLE DO GO OUT AND CHECK THAT ON A ROUTINE BASIS AND THEY HAVE NOT FOUND THAT THERE WAS ANY LEAKS. I HAVEN'T. IT CERTAINLY WOULD BE A VERY GOOD

RECOMMENDATION TO PUT IN THERE.

MR. LEE: WHO IS GOING TO BE RESPONSIBLE, IN THE ALTERNATIVES THAT ARE DISCUSSED HERE, WHO IS GOING TO BE RESPONSIBLE FOR MONITORING ALL THE GAS AND OIL WELLS IN ERIE COUNTY, IS THAT GOING TO BE THE STATE'S RESPONSIBILITY?

MS. TAN: I THINK THAT'S SOMETHING EPA AND THE STATE STILL HAVE TO WORK OUT HOW THAT'S GOING TO BE DONE, BECAUSE CERTAINLY WE WANT TO BE KEPT INFORMED OF ANY OF THESE PROBLEMS BECAUSE THEN WE CAN RECONSIDER THESE SORTS OF PROBLEMS AGAIN.

MR. LEE: BECAUSE THERE IS A LOT OF WELLS IN THIS AREA AND IT'S A PRETTY BIG JOB.

MS. TAN: THE BUREAU OF OIL AND GAS MANAGEMENT ARE INVOLVED IN THAT PROGRAM AND THEY REGULATE IT.

MR. LEE: I THINK THAT'S ALL THE QUESTIONS I HAVE.

I JUST WANT TO PUT IN A COUPLE COMMENTS. I'M FAMILIAR WITH EPA'S PROCEDURES IN HAZARDOUS WASTE CLEAN UPS AND THINGS, AND I REALIZE THE PRESQUE ISLE SITE IS ECOLOGICALLY SENSITIVE AND SENSITIVE TO A LOT OF PEOPLE IN THE ERIE AREA, BUT I WANT TO SAY THAT I DO AGREE WITH EPA'S RECOMMENDATIONS, THE SITE SHOULD BE DELETED FROM THE NPL SUPERFUND WITH THE PROVISION THAT IT CAN BE RELISTED, OR EMERGENCY FUNDING CAN TAKE PLACE IF THERE IS ANOTHER DISCHARGE. THERE HAS BEEN NO DISCHARGE FOR QUITE A WHILE, AND IT CERTAINLY IS A LOT BETTER THAN THE DAYS WHEN HAMMERMILL USED TO INJECT THE WASTE DIRECTLY INTO THE LAKE. AS LONG AS THERE IS NO OTHER RECURRENCES, AND I KNOW PRESQUE ISLE IS FAIRLY LARGE AND IT'S HARD TO MONITOR THINGS LIKE THAT, BUT I THINK THAT THERE IS NO REASON TO KEEP THE SITE ON THE NPL. AND INFORMING WELL DRILLERS IN THE AREA IS A GOOD IDEA.

BUT THE ONLY RECOMMENDATION THAT I WOULD HAVE IS, TO FIRST OF ALL CHECK THE PRESSURE AT THE WELL, SEE IF IT'S LEAKING, FIND OUT WHAT THE LEAKING IS. I KNOW IT'S NATURAL GAS. AND IF IT'S NOT COMING FROM THE WELL, IT'S COMING FROM SOMEWHERE, BECAUSE I DID SMELL IT, AND THAT WAS UNUSUAL.

BUT THOSE ARE THE ONLY RECOMMENDATIONS I HAVE, AND PERHAPS MAYBE INCLUDE THAT BEFORE YOU WRITE THE RECORD OF THE DECISION PER SE.

THANKS.

MS. TAN: THANK YOU.

MR. WRIGHT: MY NAME IS JACK WRIGHT, I'M AN EMPLOYEE OF IT CORPORATION, WE WERE RETAINED BY HAMMERMILL PAPER COMPANY.

IN RESPONSE TO THIS GENTLEMAN'S QUESTIONS, I WOULD LIKE TO STATE THAT I WAS AT THE WELL PLUGGING OPERATION INVOLVED IN 1982, IT WAS A FIVE WEEK EFFORT. WE WERE THERE MONITORING THE EFFORTS THAT THE STATE WAS UNDERTAKING. THE WELL WAS COMPLETELY CLEANED OUT OF ALL CASING, IT WAS CEMENTED UP TO A LEVEL OF ABOUT 900 FEET. THE STATE HAD MADE A DECISION RATHER THAN TO CEMENT THE ENTIRE WELL SHUT, THE NATURAL DEVONIAN SHELL WAS PRODUCING QUITE A VOLUME OF NATURAL GAS, I THINK THE READING WAS ABOUT 103 PSI, SO THEY CEMENTED UP TO A LEVEL OF 955, CAPPED THE WELL FOR LATER

DEVELOPMENT AS AN ENERGY SOURCE. SO ANY READINGS YOU WOULD BE LOOKING AT WOULD ONLY BE NATURAL GAS FROM THE DEVONIAN SHELLS, AND IN FACT IF THERE WAS A GAS LEAK, PROBABLY THE WELL RELATED TO THAT.

MS. TAN: THANK YOU.

MR. WELCH: MY NAME WILLIAM WELCH, I REPRESENT THE ERIE COUNTY ENVIRONMENTAL COALITION.

WE REQUEST AN EXTENSION ON THE TIME FOR COMMENTS. WE WERE NOTIFIED ON MONDAY, AND I CHECKED WITH THE LIBRARY, AND JUST NOT ONLY ARE THERE DOCUMENTS THERE, BUT THERE IS SUPPORTING DOCUMENTS, THERE IS TWO BOXES OF SUPPORTING DOCUMENTS. AND YOU PROBABLY REALIZE THAT'S A PRETTY SHORT TIME TO MAKE ANY KIND OF COMMENTS BASED ON THE FACT THERE IS A LOT OF INTEREST IN THE SCIENTIFIC COMMUNITY ABOUT THIS SITUATION, AND HAZARDOUS WASTE WRITTEN BY DR. SAMUEL EPSTEIN, UNIVERSITY OF ILLINOIS TOXICOLOGIST, HE WROTE EXTENSIVELY ABOUT THIS SITUATION. AND THE SCIENTIFIC COMMUNITY IS VERY MUCH INTERESTED IN THIS. SO WE ARE GOING TO, UNDER AMENDMENT 3 FOR FUNDING AS A CITIZENS GROUP TO GET OUTSIDE EVALUATION, PARTICULARLY IN COMPUTER MONITORING. AND ALSO WE HAVE SECURED AND TALKED TO SOME INDIVIDUALS WHO HAVE WORKED NOT ONLY IN THIS COUNTRY, BUT ONE OF THEM WORKED IN ISRAEL AND JAPAN AND KOREA IN THIS TYPE OF SITUATION. SO WE WOULD LIKE TO GET AN EXTENSION OF AT LEAST A MONTH'S TIME ON THIS BECAUSE THERE IS NO REAL RUSH ON THIS WELL.

FURTHERMORE, WE HAVE SOME QUESTIONS. HAS MR. MACKIE BEEN REPLACED WITH THE PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES ON THE GAS DIVISION? I MEAN, HAS HIS JOB BEEN FILLED BY SOMEONE ELSE? HE DIED. HAS ANYONE ELSE TAKEN HIS POSITION?

MR. GORMAN: I'M NOT SURE OF THE PERSONNEL SET UP IN THE OIL AND GAS WELL --

MR. WELCH: IS THERE ANYONE HERE? IS THERE ANYONE HERE FROM THE OIL AND GAS BUREAU?

MS. MILLER: I DON'T BELIEVE SO, WE CAN TRY AND FIND OUT.

MR. WELCH: THE OTHER THING, RECENTLY IN THE LAST COUPLE YEARS WE HAVE HAD SOME EARTHQUAKES, JUST RECENTLY IN ASHTABULA AND LAKE COUNTY, AND NATIONAL RESOURCES DEFENSE COUNSEL IN ONE OF THEIR PUBLICATIONS MENTIONED THE FACT IF THAT EVER HAPPENED AND WHATEVER SOURCE, WE COULD HAVE SERIOUS CONSEQUENCES IF THIS EVER BUILT UP IN AREAS.

MY QUESTIONS ARE REALLY TO OIL AND GAS. I'VE BEEN IN CONTACT WITH MR. SHOENER ABOUT THIS A LONG TIME BECAUSE OF THE FACT THE SITUATION EXISTS WHEREVER THIS STUFF IS, AND NO ONE REALLY KNOWS. AND I THINK THAT SINCE MR. SHOENER IS LEAVING THE AGENCY, AND HE WAS PROBABLY THE MOST KNOWLEDGEABLE IN THIS AREA, THEY ASKED ABOUT TWO OR THREE YEARS AGO FOR MONITORING REPORTS AND NOTIFICATION BE GIVEN TO OIL AND GAS DRILLERS, AND I'VE NEVER SEEN ANY OF THOSE NOTIFICATIONS, IF THEY WERE GIVEN TO OIL AND GAS DRILLERS AT THAT TIME. I DON'T KNOW. MR. MACKIE ISN'T HERE TO DEFEND HIMSELF. I'VE NEVER SEEN THEM.

I WONDER, MARK, IF YOU COULD PROVIDE THOSE? WITH KEN YOUNG, DID HE EVER GET ANY OF THOSE, HAVE YOU EVER SEEN THEM?

MR. GORMAN: MY UNDERSTANDING OF MR. SHOENER'S RECOMMENDATIONS WERE THAT THEY WERE JUST THAT, RECOMMENDATIONS THAT ARE BEING PROPOSED AS THE RECOMMENDED ALTERNATIVE AT THIS TIME, SO THERE HASN'T BEEN A NOTIFICATION PROCEDURE PUT INTO PLACE TO DATE.

MS. TAN: THOSE RECOMMENDATIONS HAVEN'T BEEN FINALIZED, THAT'S WHAT WE ARE WORKING TOWARDS RIGHT NOW BY FORMULATING THEM IN A RECORD OF DECISION WHICH WILL BIND EVERY ONE TOWARDS IMPLEMENTING THOSE.

MR. WELCH: WE ARE REAL CONCERNED ABOUT THE FACT THAT DER -- I JUST ASKED MR. GIZA IF HE KNOWS. MR. MACKIE DIED, AND I DON'T KNOW IF ANYONE ELSE HAS TAKEN HIS POSITION.

MR. GORMAN: THERE ARE OIL AND GAS INSPECTORS --

MR. WELCH: WHAT'S HAPPENED IS, OIL AND GAS HAS SUBSIDED, THE DRILLING HAS KIND OF, BECAUSE OF THE PRICE OF A BARREL OF OIL, DROPPED. BUT IF YOU READ THE NEW YORK TIMES ON SUNDAY YOU REALIZE HALLIBURTON COMPANY IS A REAL GOOD INVESTMENT, AND THEY ARE A FRACTURING COMPANY. THAT THERE IS SOME INVESTORS SAYING NOW IS THE TIME TO START GETTING INTO OIL AND GAS AND START DRILLING.

THERE IS SOME QUESTION IN TERMS OF MEDINA FORMATION IN THIS AREA. I DON'T KNOW HOW MANY MORE LEASES ARE AVAILABLE, BECAUSE THEY DEAL -- IT'S CALLED ROSE RUN FORMATION, THERE IS SOME SPECULATION THERE IS SOME GAS IN, THAT'S A DEEPER FORMATION. I THINK THERE ARE SOME PEOPLE -- I KNOW SOME DRILLERS HAVE INTEREST IN EXPLORING OTHER FORMATIONS, AND I THINK THAT WITH THE SITUATION BEING AS IT IS RIGHT NOW, THERE ISN'T MUCH DRILLING. I MEAN, THERE IS SOME, BUT NOT TO THE EXTENT IT WAS A COUPLE YEARS AGO.

I THINK THAT THE DER SHOULD PUT BACK IN THE POSITION SOMEONE RESPONSIBLE FOR COORDINATING THIS, OTHER THAN MARK, BECAUSE MARK WORKS IN A DIFFERENT AREA, HE DOESN'T WORK DIRECTLY IN OIL AND GAS, HE WORKS IN THE HAZARDOUS END OF IT. THE OIL AND GAS, THEY CAN TELL WHILE THE DRILL IS THERE --

MR. GORMAN: IF I COULD ANSWER YOUR QUESTION, DER HAS AN OIL AND GAS INSPECTOR ASSIGNED TO ERIE COUNTY ON A FULL TIME BASIS, HE WORKS OUT OF THE MEADVILLE OFFICE.

MR. WELCH: THE THING I JUST READ IN THE PAPER CHAMBERSBURG OFFICE, THEY PUT SOMEONE IN THERE FROM ANOTHER COUNTY. DER CAN DO THAT. IT SEEMS LIKE ALL THE AGENCIES THAT'S SUPPOSED TO BE MONITORING THE STATE ARE DOWN IN MEADVILLE. AT ONE TIME WE HAD AIR QUALITY UP IN ERIE, BUT THEY MOVED THAT OUT, THEY MOVED IT INTO MEADVILLE. THE MOST IMPORTANT THING IN TERMS OF AIR QUALITY AND WATER QUALITY, THE COUNTY DESERVES SOME TREATMENT, GETTING SOMEBODY UP HERE. I THINK THE NEW ADMINISTRATION IS GOING TO DO SOMETHING, GET MORE PEOPLE.

WHAT WE WOULD LIKE IS AN EXTENSION OF TIME. I CAN'T GO IN AND SPEND DAYS READING. WE WANT TO SEND IT OUT. THE NATIONAL SIERRA CLUB IS VERY INTERESTED IN IT BECAUSE OF THE FACT IT'S JUST A UNIQUE SITUATION, THERE IS THE SCIENTIFIC COMMUNITY JUST OF NATURAL CURIOSITY IS INTERESTED BECAUSE IT'S A UNIQUE OCCURRENCE.

MS. TAN: ONE THING I'D LIKE TO SUGGEST, THAT ONCE ALL OF THE PEOPLE WHO ARE INVOLVED GET A HOLD OF THIS MATERIAL, IN FACT EITHER WE CAN COME OUT THERE OR YOU CAN COME DOWN TO OUR PLACE IN PHILADELPHIA, AND WE CAN TALK. I'VE SEEN A LOT OF --

MR. WELCH: WELL, SOME OF THESE PEOPLE ARE LOCATED OUT OF THE COUNTRY THAT I'M GOING TO SEND THIS MATERIAL TO. I'M GOING TO HAVE DIFFICULTY, THEY ARE ON SABBATICAL LEAVE. WHAT I NEED IS -- I'VE LOOKED AT BIBLIOGRAPHIES, IT'S JUST A MESS. I HAVEN'T -- IS IT DR. WALKER OR MR. WALKER, I READ MR. SHOENER'S MATERIAL, I HAVEN'T SEEN MR. WALKER'S MATERIAL. THE THING IS, I JUST DIDN'T HAVE TIME, BECAUSE THIS HEARING, YOU JUST SENT THE INFORMATION OUT LAST THURSDAY TO THE LIBRARY, AND YOU HAD THE HEARING. THE NOTIFICATION WAS JUST LAST WEEK. IT'S JUST SHORT NOTICE TO GO THROUGH THE SUPPORTING DOCUMENTS, AND THAT'S WHAT WE WOULD LIKE TO DO. PLUS THE FACT WE DON'T WANT TO DO THIS HASTILY, BECAUSE YOU REMEMBER BUTLER TUNNEL DOWN THERE THEY TOOK IT OFF AND DELISTED IT AND IT CAME BACK ON AGAIN. WE JUST DON'T WANT TO SEE A SITUATION LIKE THAT OCCUR.

MS. TAN: IT WAS DELISTED, WE HAVE NO PROBLEM RELISTING THINGS.

MR. WELCH: WELL, THE QUESTION ON OUR MIND IS, IS THE SOURCE OF THIS, WHETHER IT'S A NATURAL SOURCE OR WHETHER IT'S A MAN MADE SOURCE, AND THAT'S A REAL CRITICAL ISSUE. AND I THINK IN TERMS OF GAS DRILLERS, TOO, BECAUSE THEY GET BLAMED FOR A LOT OF THINGS. THIS IS SOMETHING THEY HAVE NO RESPONSIBILITY ON YET, THEY ARE TAKING ALL THE RISK.

MS. MILLER: POSSIBLY WE CAN HAVE A SMALL MEETING. ARE ANY OF YOUR EXPERTS IN THE AREA?

MR. WELCH: I JUST TALKED TO ONE TODAY, IN FACT ONE USED TO WORK -- HE WORKED FOR THE EPA IDENTIFYING HAZARDOUS WASTE SITES, ANOTHER ONE IS AN ISRAELI THAT WORKS ALL OVER THE WORLD, AND I HAVE TO GET IN TOUCH WITH HIM, HE'S ON SABBATICAL, I DON'T KNOW WHERE HE IS RIGHT NOW BECAUSE I TRIED TO CALL HIM. HE'S A HYDROGEOLOGIST AND A CHEMIST, SO HE'S REAL CONCERNED.

DR. MATTERSON'S OFFICE AT CASE WESTERN UNIVERSITY IN CLEVELAND HAS DONE STUDIES ON EFFECT OF METHANE REDUCING ACTION ON HAZARDOUS MATERIALS, AND THIS IS QUITE INTERESTING BECAUSE OF THE FACT IT FREEZES UP SOME OF THE HEAVY METALS IN WATER. AND UP IN, I BELIEVE IT WAS MADISON, OHIO, THERE WAS A CASE INVOLVING THIS. WE WOULD LIKE TO KNOW WHAT EFFECTS HYDROGEN SULFIDES GAS ON REDUCING SOME OF THESE HEAVY METALS IN FORMATIONS IS, BECAUSE THERE ARE PRESENCE OF MATERIALS THERE, BUT THEY ARE BOUND UP. BUT IF YOU FREE THOSE GASES IN FORMATIONS, WHAT IS THAT GOING TO DO? WE DON'T KNOW. WE WOULD LIKE TO SEND THIS INFORMATION TO THOSE PEOPLE.

MS. TAN: WELL CERTAINLY WE ARE NOT TALKING ABOUT DELETING THE SITE, WE ARE NOT TALKING ABOUT MAKING A DECISION AT THIS POINT IN TIME --

MR. WELCH: WE WOULD LIKE TO MAKE COMMENTS BEFORE YOU DO ANYTHING, SO WE HAVE SOME EXPERT OPINION AND WE KNOW IT'S OUT THERE. WE HAVE PEOPLE THAT HAVE

DONE THIS STUFF, THEY ARE PROFESSIONALS IN THIS FIELD. I'M NO PROFESSIONAL IN THIS. IT'S A VERY COMPLICATED SITUATION.

MS. TAN: I AGREE.

MR. ANDREWS: MY NAME IS TRUMAN ANDREWS, I'M MANAGER OF ENVIRONMENTAL AFFAIRS FOR HAMMERMILL PAPER COMPANY, AND I WOULD LIKE TO REGISTER FOR THE RECORD MY OBJECTION TO THE REQUEST FOR ADDITIONAL TIME.

THIS ISSUE HAS BEEN A MATTER OF RECORD EVER SINCE IS OPENED IN 1979. IT WAS OPENED BY DER, AND THEIR RECORDS ARE OPEN TO THE PUBLIC. MR. WELCH KNOWS WHERE THEIR RECORDS ARE. IT'S A MATTER OF RECORD THAT EPA -- EVERY BIT OF THE TECHNICAL INFORMATION THAT HAS BEEN DEVELOPED OVER THE NINE YEARS THAT THIS ISSUE HAS BEEN BEFORE THE PUBLIC. THE EPA AND DER RECORDS HAVE BEEN AVAILABLE TO ANY OF THE INTERESTED PUBLIC.

I WOULD OBJECT TO ANY TIME EXTENSION. I THINK IT'S TIME DECISIONS WERE MADE AND THE ISSUE MOVES ON.

NOW, 30 DAYS IS AN INFINITESIMAL AMOUNT OF TIME COMPARED TO NINE YEARS. MR. WELCH KNOWS EXACTLY WHERE HE CAN COME. WE OPEN THE DOORS. WE HAVE ALWAYS HAD OUR DOORS OPEN TO ANYBODY WHO IS INTERESTED IN THE TECHNICAL FACTS. MR. WELCH IS WELCOME TO COME TO HAMMERMILL TOMORROW IF HE DESIRES, WE HAVE ALL OF THE DOCUMENTS, WE'LL KEEP MR. WRIGHT HERE AND WE'LL KEEP HIM AT THE SERVICE OF MR. WELCH.

NOW, I THINK THIS IS TOTALLY UNTIMELY AND IT'S INAPPROPRIATE, BUT MR. WELCH HAS A RIGHT TO SPEAK ON A PUBLIC FORUM, BUT I WOULD LIKE TO HAVE MY OBJECTION REGISTERED, PLEASE. THANK YOU.

MS. MILLER: THANKS.

ARE THERE ANY OTHER QUESTIONS FROM ANYONE?

MR. LEE: SCOTT LEE AGAIN.

THIS QUESTION IS NOT DIRECTED TO EPA, BUT PERHAPS MR. GIZA CAN ANSWER THIS. WHEN YOU RUN A WEEKLY -- WHEN WEEKLY BACTERIA COLIFORM SAMPLES ARE TAKEN AT THE LAKE, I'M WONDERING IF THEY SAMPLE FOR ANY ORGANIC OR INORGANIC CONTENTS IN THE WATER ALSO?

MR. GIZA: IT'S JUST BACTERIAL STUDIES.

MR. LEE: THERE WAS AN INCIDENT, I CAN'T REMEMBER, IT WAS IN THE '70'S, I THINK, WHERE SOME BLACK LIQUID WAS COMING ACTUALLY OUT OF THE LAKE OFFSHORE FROM HAMMERMILL, THIS IS BY NO MEANS TO IMPLICATE ANYONE, BECAUSE IT COULD BE NATURAL ALSO, IT WAS ALSO LIKE AN OIL SLICK, ALTHOUGH IT WASN'T OILY, OF COURSE. THIS IS WHAT I'M WONDERING, ARE THERE AND -- AND THIS IS NOT THE EPA, IT'S THE DEPARTMENT OF HEALTH, I GUESS -- ARE THERE ANY EXISTING SAMPLING METHODS THAT IF THIS OCCURRENCE EVER HAPPENS AGAIN WOULD THEY BE ABLE TO GO OUT AGAIN AND DETERMINE WHAT THIS STUFF IS? THIS MAY HAVE BEEN -- THEY CAN'T PROVE THAT IT WAS RELATED TO THE SITE OR ANYTHING LIKE THAT, AND I WAS JUST WONDERING IF THERE WAS ANYTHING ESTABLISHED IN ERIE COUNTY FOR THIS KIND OF SAMPLING?

MS. TAN: I THINK THE THOUGHT WAS THAT IT WAS PROBABLY THE LEAKS FROM THE SEWER SYSTEM. IS IT INKY?

MR. LEE: YES.

MS. TAN: THAT'S WHAT --

MR. LEE: FROM WHAT SOURCES? ERIE
OUTFALL?

MS. MILLER: MR. WELCH?

MR. WELCH: I WOULD LIKE TO COMMENT. WE
DIDN'T KNOW ANY FEDERAL ACTION WAS GOING TO BE TAKEN.
I WAS UNDER THE OPINION THERE WAS STILL MONITORING
REPORTS, AND IT WOULD BE PREMATURE FOR ME TO ASK
HAMMERMILL OR ANYONE, TO ASK ANYONE UNLESS THE FINAL
CONCLUSIVE IS IN. I HAD NO IDEA THIS COMPUTER
MONITORING WAS DONE.

I'VE NEVER SEEN A BIBLIOGRAPHY OR TYPED
BIBLIOGRAPHY TO THIS EXTENT. THIS IS THE FIRST TO MY
KNOWLEDGE OF ANY OF THIS TYPE OF MATERIAL BEING IN
SUCH A MANNER. WE DON'T HAVE TIME TO GO DOWN TO
PHILADELPHIA. WE DO GO DOWN TO DER, WE GO THROUGH
SOME OF THE FILES, BUT IN MANY CASES THIS IS IN
DIFFERENT PLACES. THE THING IS I'VE NEVER SEEN IT PUT
TOGETHER ALL IN ONE PLACE. WE DIDN'T KNOW THERE WAS
GOING TO BE ANY FEDERAL ACTION. I WAS UNDER THE
OPINION AFTER TALKING TO MR. SHOENER THERE WAS GOING
TO BE CONTINUED MONITORING AND OTHER TESTS IN THIS
AREA, I HAD NO IDEA THIS ACTION WAS GOING TO BE TAKEN.
THE FIRST I HAD WAS NOTICE IN THE PAPER, AND THAT WAS
LAST WEEK. SO IT SEEMS TO ME THAT'S THE REASON WE ARE
ASKING FOR THIS EXTENSION, NOT BECAUSE WE DIDN'T HAVE
ACCESS, BUT BECAUSE OF THE ACTION BY THE FEDERAL
GOVERNMENT IN RELATIONSHIP TO THIS SITUATION.

MS. MILLER: WOULD IT HELP -- AND I WILL
JUST THROW THIS OUT AS A COMMENT, BUT MAYBE BEFORE THE
END OF THE COMMENT PERIOD, WHICH IS SEPTEMBER 11TH,
MAYBE WE CAN DO ANOTHER WEEK ON THAT OR SO. BUT MAYBE
WE CAN HAVE ANOTHER MEETING EITHER A SMALLER GROUP
MEETING OR PUBLIC --

MR. WELCH: WHAT WE WOULD LIKE TO DO IS
UNDER THAT AMENDMENT 3 WOULD LIKE TO BRING SOME
EXPERTS IN. WE WOULD LIKE TO DO SO. WE HAVE
INTERNATIONALLY KNOWN EXPERTS THAT ARE HYDROGEOLOGISTS
AND THEY ARE GEOLOGISTS AND THINGS, BECAUSE I CAN'T
ASK THEM OVERNIGHT TO DO SOMETHING LIKE THIS BECAUSE I
DIDN'T KNOW THIS ACTION WAS GOING TO BE TAKEN PLACE.
WE HAVE SO MANY OTHER THINGS. AS YOU KNOW, THERE IS
ALL KINDS OF ACTIONS AND PERMITS COMING OUT, AND WE
DON'T HAVE TIME JUST TO CONCENTRATE ON ONE SUPERFUND.
AS YOU KNOW THERE IS THREE OF THEM IN THIS COUNTY, AND
ADDITIONAL ONES DOWN SOUTH AND ALL OVER THE PLACE, AND
ALL KINDS OF ENVIRONMENTAL SITUATIONS COMING UP
CONSTANTLY.

WE HAD NO IDEA THIS NOTIFICATION WAS GOING
TO TAKE PLACE UNTIL RECENTLY, THAT'S WHY WE ARE
ASKING, SO OUR EXPERTS CAN SEE THAT AS WELL. THEIR
EXPERTS HAVE SEEN IT FOR A PERIOD OF NINE YEARS, OURS
HAVEN'T BECAUSE WE HAVEN'T HAD THE TIME. WE DON'T
HAVE THE RESOURCES OF INTERNATIONAL PAPER TO DO ALL
THE RESEARCH THEY DO. WE TO HAVE PEOPLE COMMITTED
SCIENTIFICALLY TO EXAMINE THIS.

MS. TAN: HOPEFULLY YOUR EXPERTS AND THEIR
EXPERTS ARE OUR EXPERTS, BECAUSE WE HAVE CERTAINLY HAD
MANY EXPERTS LOOK AT THIS MATERIAL ALSO. AND I THINK

WE STATED THE RI/FS REPORT WAS WRITTEN BY ED SHOENER,
AND IT WAS WRITTEN IN OCTOBER OF '85.

I THOUGHT IT WOULD BE A GOOD IDEA TO PULL
ALL THE RECORDS IN THE WORLD FROM THE ENDS OF THE
EARTH TOGETHER AND LOOK AT IT ONE MORE TIME AND
COMPILE IT ALL IN ONE PLACE, AND THAT'S WE DID.

MR. WELCH: THAT'S WHAT I SAY, I'VE NEVER
SEEN IT ASSEMBLED IN THAT FASHION. THAT'S THE
DIFFERENCE. AND YOU CAN'T EXPECT THREE OR FOUR YEARS
OF THEIR WORK TO BE EXAMINED IN TWO WEEKS BY PEOPLE
WHO HAVE NO KNOWLEDGE IN TERMS -- I CAN'T LOOK AT THAT
STUFF. WE HAVE TO HAVE OUR EXPERTS. THERE IS NO WAY
THEY CAN LOOK AT IT IN THAT SHORT OF TIME. AND IT'S
BEING HELD IN AUGUST, RIGHT WHEN PEOPLE ARE ON
VACATION, MANY OF THE PROFESSIONALS. I'VE TRIED TO
CALL ON THEM, AND I CAN'T EVEN GET A HOLD OF THEM, ONE
IS -- I DON'T KNOW WHERE HE IS.

MS. MILLER: WHAT WE CAN DO POSSIBLY WHEN
WE GET BACK TO THE OFFICE TOMORROW IS TALK TO THE
DIFFERENT SUPERVISORS INVOLVED AND REQUEST A WEEK TO
TEN DAYS EXTENSION.

MR. WELCH: I DON'T THINK THERE IS ANY
NEED FOR ANY GREAT MOVEMENT BECAUSE OF THE FACT,
OBVIOUSLY, THERE IS NO PROOF THAT IT'S HAMMERMILL, SO
WHAT SHOULD THEY WORRY ABOUT?

MR. ANDREWS: BECAUSE, BILL, IT COST US A
MILLION DOLLARS AT THIS POINT IN TIME TO TRY AND
DEFEND OURSELF AGAINST THE ACCUSATIONS, THE GUILTY
BEFORE PROVEN INNOCENT.

AND I WANT TO CONTINUE MY OBJECTION TO ANY
FURTHER DELAY IN EPA'S PROCEEDING ON THIS PARTICULAR
SITE.

MS. MILLER: ANY OTHER QUESTIONS?

(NO RESPONSE.).

MS. MILLER: I GUESS IF THERE ARE NO MORE
QUESTIONS, THEN, PLEASE, YOU KNOW, WRITE YOUR COMMENTS
DOWN IF YOU LIKE, MAIL THEM TO EPA. IN FACT, SHEETS
ARE IN THE BACK, OUR ADDRESSES ARE ON THEM, AND WE
REALLY URGE YOU TO PUT EVERYTHING IN WRITING YOU LIKE
AND SEND IT TO US SO WE CAN PUT IT INTO THE OFFICIAL
RECORD FOR THIS DECISION.

AND THANK VERY MUCH FOR COMING TONIGHT, WE
APPRECIATE YOUR TIME.

(THEREUPON, AT 8:30 O'CLOCK P.M. THE
HEARING WAS CONCLUDED.).

APPENDIX D
WRITTEN COMMENTS

MRS. DONNA M. STOCZYNSKI
453 EAST 28TH STREET
ERIE, PA 16504
SEPTEMBER 13, 1987

PATRICIA TAN
U.S. EPA - HAZARDOUS WASTE
ENFORCEMENT BRANCH
841 CHESTNUT STREET
PHILADELPHIA, PA. 19107

DEAR MS. TAN,

THE ABILITY TO SEE INTO THE FUTURE, WHERE ENVIRONMENTAL PROBLEMS ARE CURRENTLY A THREAT, WOULD BE A GIFT THAT ANY ENVIRONMENTAL ADMINISTRATOR WOULD GLADLY ACCEPT. THIS GIFT WAS NEEDED ESPECIALLY IN REFERENCE TO THE PERMITS THAT THE DER GRANTED TO HAMMERMILL PAPER COMPANY FOR THE DRILLING OF DEEP INJECTION WELLS TO DISPOSE OF OVER 1.09 BILLION GALLONS OF NEUTRAL SULFITE BETWEEN 1964 AND 1971. THE COMPANY WORKED WITHIN GUIDELINES THAT WERE STIPULATED BY THE STATE AT THAT PARTICULAR TIME. I QUESTION THE DER'S PERMISSION TO DRILL WELLS FOR THE DISPOSAL OF RESIDUAL - NOT KNOWING THE FULL RAMIFICATIONS AND ENVIRONMENTAL IMPACT OF INJECTING UNDER SUCH FORCE IN AN AREA THAT POSSESSES FORMATIONS THAT WOULD FRACTURE AND SEEP INTO PROXIMAL AREAS. THE GAS WELL AT BEACH #7 IN ALL PROBABILITY WAS AN OUTLET FOR SOME OF THE PAPER COMPANY'S EFFLUENT - BUT "PROBABILITY" WILL NOT HOLD UP IN A COURT OF LAW. WAS THE SEEPAGE CAUSED BY NATURAL PHENOMENA OR THE DEEP INJECTION OF WASTES BY HAMMERMILL? INQUIRIES BY PUBLIC AND PRIVATE PERSONNEL HAVE NOT LED TO ANY CONCLUSIVE EVIDENCE. HOW DO YOU CORROBORATE THE PRESENCE OF LIGNIN AS PART OF WELL #7'S DISCHARGE? WAS IT FROM A NATURAL PETROLEUM SOURCE OR PULP LIQUOR?

HAMMERMILL APPEARS TO HAVE "LADY LUCK" ON IT'S SIDE THIS TIME. THE ONLY KNOWN SOURCE OF SEEPAGE HAS BEEN CAPPED AT BEACH NO. 7. THE GROUND WATER AND SOILS IN THE AREA DO NOT APPEAR TO BE UNDER ANY IMMEDIATE THREAT. I THEREFORE APPROVE THE DECISION OF THE FINAL REPORT. THERE ARE TOO MANY OTHER SITES ON THE NPL THAT NEED ATTENTION - IN PARTICULAR THE HARPER DRIVE SITE IN MILLCREEK TOWNSHIP. THE WELL, GROUNDWATER AND SOILS SHOULD BE TESTED PERIODICALLY FOR ANY CONTAMINATION AND THE PRESQUE ISLE SITE SHOULD BE REMOVED FROM THE NPL.

SINCERELY,

MRS. DONNA M. STOCZYNSKI, B.S.; M.P.A.

AFTERNOTE: I AM AN INSTRUCTOR IN 10TH GRADE BIOLOGY AT CATHEDRAL PREPARATORY SCHOOL IN ERIE. I OBTAINED MY MASTERS FROM GANNON IN 1986 IN PUBLIC ADMINISTRATION. I RESEARCHED MANY ENVIRONMENTAL AREAS - IN PARTICULAR AIR POLLUTION AND TOXIC WASTE ISSUES. MY THESIS DEALT WITH THE HARPER DRIVE SITE IN MILLCREEK.

TOWNSHIP OF MILLCREEK

AUGUST 19, 1987

MS. PATRICIA TAN
ENFORCEMENT PROJECT OFFICER
U. S. EPA, REGION III
841 CHESTNUT STREET
PHILADELPHIA, PA 19107

DEAR MS. TAN,

THE SUPERVISORS OF MILLCREEK TOWNSHIP WOULD LIKE TO REVIEW EPA CONTRACT
NUMBER 68-01-7331, WORK ASSESSMENT NUMBER 109. HOW DO WE GET A COPY
OF SAID REPORT?

OUR PERSONNEL WHO ATTENDED THE MEETING LAST THURSDAY REPORTED THAT THERE
IS A PROBLEM WITHIN THE ERIE COUNTY NORTHERN REGION. THE RI/FS STUDY
REPORT RECOMMENDED TWO ACTIONS: (1) NOTIFY LOCAL DRILLING COMPANIES OF
PRESENCE OF HYDROGENSULFIDE GAS AND (2) PURCHASE SOPHISTICATED
HYDROGENSULFIDE TESTING EQUIPMENT.

HOW DOES LOCAL GOVERNMENT PROTECT THE CLEAN AIR OUR RESIDENTS NEED TO
BREATHE? WHO IS THE ENFORCEMENT PRIME MOVER, EPA OR PENNSYLVANIA DER?
MILLCREEK TOWNSHIP NEEDS YOUR HELP IN IDENTIFYING ENFORCEMENT PERSONNEL.

AFTER REVIEW, MILLCREEK TOWNSHIP MAY HAVE MORE QUESTIONS ON BLACK WATER
AND BE MORE AWARE OF POTENTIAL PROBLEMS ON CLEAN AIR QUALITY CONTROL AND
ENFORCEMENT.

SINCERELY,

GEORGE S. PULAKOS
SUPERVISOR

GSP/PV.

HAMMERMILL PAPER COMPANY

AUGUST 28, 1987

CERTIFIED MAIL
RETURN RECEIPT REQ.

PATRICIA TAN
ENFORCEMENT PROJECT OFFICER
US EPA REGION III
841 CHESTNUT STREET
PHILADELPHIA, PA 19107

RE: PRESQUE ISLE SITE
RECOMMENDATIONS OF THE REMEDIAL INVESTIGATION/FEASIBILITY
STUDY - AUGUST 1987

DEAR MS. TAN:

HAMMERMILL PAPER COMPANY HEREWITH ACKNOWLEDGES RECEIPT OF THE FINAL
REPORT - RECORDS COMPILATION - PRESQUE ISLE STATE PARK, ERIE, PA
SUBMITTED BY VERSAR INC., SPRINGFIELD, VA 22151 DATED AUGUST 3, 1987.

AS YOU ARE AWARE, WE APPEARED AT THE PUBLIC HEARING HELD AT WEST
LAKE JR. HIGH SCHOOL ON THE EVENING OF AUGUST 13, 1987, AT 7:30 PM AND
SPOKE FAVORABLY ON THE PROPOSED REMEDY AS CONTAINED IN THE HEARING
INFORMATION PASSOUT AND IN THE RECOMMENDATIONS MADE BY VERSAR INC.

DURING THE HEARING WE ALSO SPOKE AGAINST ANY DELAYS IN THE COMMENT
PERIOD AS REQUESTED BY A SPECIFIC INDIVIDUAL. OUR OBLIGATION IS BASED
ON THE EIGHT YEAR PERIOD THIS ISSUE HAS BEEN BEFORE THE PUBLIC AND THE
ACCESSIBILITY OF THE EPA AND DER FILES IN ADDITION TO FILES IN
POSSESSION OF HAMMERMILL.

THIS LETTER HEREWITH REAFFIRMS THESE COMMENTS AND FURTHER RECOMMENDS
THAT THE SITE BE DELISTED AS SOON AS POSSIBLE. THIS RECOMMENDATION
CONCURS WITH EPA REGION III INTENT AND WITH THE RECOMMENDATION OF EPA'S
CONSULTANT.

WE HAVE BEEN IN CONTACT WITH IPSCO SEEKING INFORMATION ON THE
PRESQUE ISLE WELL PLUGGING CERTIFICATES. MR. WRIGHT IS HANDLING THIS
AND I HAVE ASKED THAT HE CONTACT YOU WITH THE RESULTS OF HIS EFFORT.

WE COMPLIMENT YOU AND YOUR ASSOCIATES FOR A WELL RUN, ORDERLY
HEARING.

VERY TRULY YOURS,

HAMMERMILL PAPER COMPANY

T. O. ANDREWS
MANAGER, ENVIRONMENTAL AFFAIRS

TOA/RMM #194

CC: MR. J. C. WRIGHT, JR. - INTERNATIONAL TECHNOLOGY CORP.

IC: MR. J. R. ROGERS - SKADDEN, ARPS
MR. D. BROCKI
MR. J. H. SPEICE
MR. R. M. LUDWIG.

TABLE 1

DESCRIPTION AND INJECTION HISTORY
OF HAMMERMILL WELLS 1, 2 AND 3
AND OF THE PRESQUE ISLE WELL
(ADAPTED FROM D'APPOLONIA-HML, 3/83)

DESCRIPTION	UNIT	HAMMERMILL WELLS			PRESQUE ISLE WELL
		NO. 1	NO. 2	NO. 3	
YEAR DRILLED	-	1963	1964	1968	1910
SURFACE ELEVATION	FEET ABOVE MSL	629.3	650	647	580
APPROXIMATE DEPTH OF BASS ISLAND FM (TOP TO BOTTOM)	FEET	1611-1688	1658-1732	1586-1737	1521-1586 *
PRIMARY INJECTION ZONE (1)	FEET	1620-1670	1620-1710	1620-1720	- (2)
PERIOD OF INJECTION	-	5/64-5/71	9/65-9/68	7/68-5/71	-
DATE OF SEALING	-	9/72	9/72	9/72	-
PUMP CAPACITY	GPM	388	831	831	-
OPERATING PUMP/SURFACE PRESSURE	PSI	1,150	1,250	1,250	-
TOTAL INJECTED VOLUME	GALLONS	4.5 X 10(8)	3.0 X 10(8)	3.5 X 10(8)	-
ESTIMATED AVERAGE INJECTION RATE (3)	GPM	121	189	237	-

(1) INJECTION FEASIBILITY TESTS WERE ALSO PERFORMED ON THE LOCKPORT FORMATION IN WELL NO. 1 AND IN THE GATESBURG FORMATION IN WELL NO. 2 (FIGURE 3). RESULTS INDICATED THESE FORMATIONS WERE NOT SATISFACTORY FOR INJECTION ZONES

(2) "-" INDICATES NOT APPLICABLE

(3) ESTIMATED FROM TOTAL INJECTED VOLUME DURING PERIOD OF INJECTION

* CORRECTED BASED ON WALKER (PADER, 8/15/83).

TABLE 3

COMPOSITIONS OF BRINES IN THE BASS ISLAND AND
 LOCKPORT FORMATIONS AT THE PRESQUE ISLE BEACH NO. 7 WELL
 (ANDREWS-HML, 10/26/83)

FORMATION	THICKNESS (FEET)	REMARKS				
DEVONIAN STRATA	1480	OVERLYING SHALLOW DEVONIAN SHALE COMMERCIAL GAS PRODUCTION STRATA				
BASS ISLAND	60	TDS (G/L)	CL (G/L)	PH	H2S (MG/LS)	
		PENNDER	-	177	6.4	235
		USGS	-	180	-	-
		D'APPOLONIA	266	186	6.6	152
		HYDROSTATIC PRESSURE: FLOW OBSERVED AT SURFACE				
SALINA	360	NO NATURAL GAS PRODUCTION				
LOCKPORT	350	TDS (G/L)	CL (G/L)	PH	H2S (MG/LS)	
		PENNDER	-	-	5.8	941
		USGS	-	-	-	-
		D'APPOLONIA	208	132	5.6	312
		HYDROSTATIC PRESSURE: FLOW OBSERVED AT SURFACE				
MEDINA		UNDERLYING COMMERCIAL GAS PRODUCTION STRATA				

DEEP SUBSURFACE CONDITIONS AT PRESQUE ISLE BEACH NO. 7 WELL.